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THE WEDGWOOD COMMITTEE REPORT.

The Wedgwood Committee Report is a very valuable document, which all interested in the day-to-day administration of a railway should read and digest; but the general student has neither the time nor the patience to go laboriously over every inch of the ground covered by it burdened as it is by a mass of statistical detail. Him, Professor Natesan has placed under a deep obligation by classifying the diverse recommendations made in the Report and adding to them his own commentary, the product of wise rumination of experience accumulated over a stretch of years. The Report has been considered anti-national at several points and it is noteworthy that Prof. Natesan has resisted the temptation to see 'red' and preserved a sanity of outlook on all the major problems tackled in it.—Ed. Note.

I

It will be no exaggeration to state that the constitution of the Indian Railway Enquiry Committee in October 1936 aroused an amount of public interest almost as great as that of the East India Railway Committee of 1920. The fundamental issue on which judgment was pronounced by the Acworth Committee was that of State *versus* Company management—a question on which public opinion had become extremely vocal and the interest evoked, therefore, justified. The passage of seventeen years with increased opportunities of discussion of railway matters afforded by the presentation of the Railway Budget, the right of interpellations and resolutions in the Central Legislature, has increased considerably the public interest in the administration, finances and management of the Indian railways to an extent not experienced before. The railway situation as it looked in 1936 proved particularly gloomy and demanded imperative action. The railways, which, under the Separation Convention, were obliged to pay a contribution to the General Revenues, found, with the beginning of the depression, so great a shrinkage in the Gross Receipts that the Net Receipts were far short even of the amount required for the full payment of the interest charges. The economies and retrenchments effected on such of the recommendations of the

Railway Retrenchment Sub-Committee in 1931 as were adopted were not sufficient to expand Net Revenue to an extent adequate for meeting the interest obligations. The Retrenchment Sub-Committee wanted an expert committee to be constituted to go into the problem of the technical aspects of railway working as these matters were obviously outside their capacity to probe. Within another two years the Government of India obtained the services of Mr. F. A. Pope and the two extended sittings of that Committee and the savings promised by the Economy Organisations on the different railways to be realised at some future date could not obviously impart any improvement in the immediate financial outlook. In view of the uncertainties of railway finance and of the financial needs of the provinces, Sir Otto Niemeyer considered that "both the early establishment of effective co-ordination between the various modes of transport and a thoroughgoing overhaul of railway expenditure in itself are vital elements in the whole Provincial problem." In 1936 the Public Accounts Committee were not satisfied with the efforts of the railways and urged that Government obtain:

> "the services of an acknowledged expert in railway management to conduct an examination of the whole field and recommend steps which will secure definite (*i.e.*, other than mere hopes of increased revenues due to improving trade) improvement in the railway finance to the extent of something like three crores a year immediately and ultimately to such magnitude as is required to maintain full solvency on a strict accounting basis."

To avoid misconception it was also added that the terms of reference should exclude the possibility of securing this end by a mere transfer of liabilities to general revenues. The appointment of the Committee with Sir Ralph L. Wedgwood, Chief General Manager of the London and North Eastern Railway; Mr. W. A. Stainer, Chief Mechanical Engineer, L. M. and S. Railway and Mr. E. H. Cheadle, Chief Traffic Manager, South African Railways, was announced in October and the Committee started their enquiry on December 1. The Committee left India on February 20. The Report was published on June 28 of this year.

Many interests were concerned in the rehabilitation of Railway Finance. The Central Government were directly interested in improving the finances of the railways as such improvement would redound to the benefit of their own revenues by the prospect of an early resumption of the Contributions. The Provincial governments were affected as, according to the Niemeyer

formula, additional financial resources were contingent on the increased resources of the Government of India. The Road Transport undertakings were anxious to know how they would stand in the scheme which was to be evolved by the Committee. The businessmen have been looking forward to an adjustment of the rates system and to the possibility of a more favourable readjustment of the rates practice to suit their own requirement. Judging from the diversity of the interests affected, it is not surprising that the Report should have obtained extensive notice and comment. The Report continued to be "news" for several weeks following the publication in the daily and the periodical press.

The Report of the Railway Enquiry Committee examines almost every phase of railway working. Their conclusions refer to both fundamental problems of railway finance and the questions of moment needing attention and correction. There are fourteen chapters in addition to the introductory chapter and the concluding chapter containing the summary of conclusions and recommendations. For purposes of our present review we may more conveniently discuss the conclusions of the Committee under two heads: the General and the Technical.

The general recommendations of the report have attracted most attention from the public, the press and the legislature. The Report starts with a financial survey of railway working from 1924 to 1936, and it is found that:

> "both in the period of acute depression and the years of partial recovery succeeding it, the railways of India showed more favourable results than the railways of other countries which passed through similar crises such as Great Britain and the United States of America."

The Committee compared the Net Revenue position, the cost of staff and the level of freight rates on the Indian railways with those on the British and the American railways and concluded that the Indian railways emerged all better for the comparison. In their attempt to secure improved Net Receipts the Committee place less emphasis on further retrenchments and economies than on measures for securing additional revenues. They do not expect any spectacular improvement during the next trade cycle on account of the fact that the present upturn in business is somewhat artificial and to that extent precarious, and the railways have to shoulder such additional burdens as the effects of the last capital programme and of the road competition which is likely to increase.

The Committee are, therefore, unable to point to any economies of first class magnitude at present realisable.

Examining in greater detail the charges to be met by railway Net Revenues, the Committee state definitely that the present rates of contribution to the Depreciation Fund are not high or unduly generous and deprecate any idea of lowering them. In view of the obvious necessity for providing for betterments and for a sufficient margin for writing down the cost of assets acquired at a time of enhanced prices "the margin between contributions and outgoings is narrow and should not be arbitrarily reduced." They recommend that it is essential to build up a general reserve fund with a maximum limit of Rs. 50 crores which would serve as "an equalisation fund to which appropriations would be made in good years and from which withdrawals could, if necessary, be made in bad years when interest charges were not fully earned. The fund would also serve, as might be necessary, for amortization purposes and the whole of any balance in excess of Rs. 50 crores would be available for this purpose." There are also other elements in the capital account such as the 20 crores debited to Capital instead of to Depreciation or revenue under the depreciation fund rules which also have to be written off. In arguing for the constitution of the Reserve Fund the Report points out:

"the financial position of the railways is thoroughly unsound when the depreciation fund has to be raided to pay interest charges. Bad years are certain to recur in the future as in the past. During the recent series of bad years it was found possible to maintain the full payment of interest charges only by drawing nearly 50 crores from the funds. The general railway reserve fund was depleted within three years and the depreciation fund was reduced to one-fourth of its original figure before the economies were effected and the return of better trade saved the situation."

It will be noticed that the Committee have adopted a really conservative attitude regarding the provision for Depreciation. Their attitude towards the resolution announced during the last budget session to write off the liabilities on account of the suspended contributions and temporary loans from the Depreciation Fund is not naturally by any means favourable in respect of the second half of the proposal.

The provision for depreciation and the necessity to build up the reserve fund make so heavy a demand on any surplus revenue that might be earned that the Committee frankly recognise that there is no:

"prospect consistent with sound management of balances accruing which could be used in relief of general taxation. It would, in our opinion, be unsound to assume for such relief at the expense of the depreciation fund or of the general reserve fund having regard for the purpose for which these are urgently required. On the other hand the existence of these funds will afford the best insurance that is possible against default by the railways in the payment of their interest charges....... These circumstances should be recognised and the railways, while they could be expected to maintain full solvency, could not be regarded as a possible source from which contributions to the general revenues might be derived."

This particular conclusion of the Committee has come in for the great deal of criticism. When hopes have been fostered on the basis of surplus railway revenues, the interests which stood to benefit from such resources would naturally be disappointed. But it should be recognised that the Committee have been logical and consistent in their reasoning. Despite the objections raised against their proposal, the fact remains that if the integrity of the Depreciation Fund—not to speak of the payment of the suspended contributions—is to be maintained there would be no balance available for the use either of the Central Governments or the Provincial Governments at any rate for some years to come. The choice therefore resolves itself to one of either restoring the railways reserves or draining the surpluses for purposes entirely different from the safeguard of railway finance. That no other alternative is possible is amply borne out by the fact that the Finance Member has only been able to suggest a sort of moratorium of these liabilities in his Resolution before the Simla session of the Legislative Assembly to enable him to secure the contribution to the general revenues.

With regard to the problem of railway amalgamations the Committee have not been quite as enthusiastic as have been the earlier authorities who have gone into it. The first serious proposal was made by the Acworth Committee which was subsequently endorsed by the Inchcape and the Pope Committees. Experience of railway amalgamations abroad and the possibilities of reducing expenditure have been the considerations which have always attracted the student of Indian railways to advocate the grouping or amalgamation of railway systems. The Wedgwood Committee are unwilling to support any immediate programme of amalgamation or redistribution of railways on such grounds as the disadvantages of unwieldy administrations, the need for easing the initial burden of the Federal Railway Authority and the existence of six Company-managed railways working under their contracts with the Government. The difficulties are certainly serious enough to justify an attitude of caution, but the Committee express doubts as regards the record of State management since 1924. The Committee observe:

> "The history of State management in India is not encouraging and it seems clear that present methods are unsatisfactory. They tend to cramp initiative, they impose complicated regulations and they involve an immense amount of routine correspondence. The inspection and supervision which is thought to be necessary in connection with the collection and expenditure of public money divert the attention of officers from work of greater importance and impose a heavy burden upon the finances of the railways. Judging from the considerations and contentions which have been put before us it does not appear possible in the main to avoid these disadvantages under any system of State management as at present understood in India in their support."

The Committee indicate their preference for private enterprise and would continue the Company-managed railways as a better alternative. At any rate they would not advocate a change of policy before 1945 and would, in the case of renewal of contracts as they expire, suggest a renewal for as long a period as possible. One cannot help observing that the Report does not sufficiently recognise, as did the Acworth Committee, that there is very little to choose between the hybrid form of organisation presented by the Company-managed railway systems—which are not true private enterprises at all in the strict sense of the term—and the State-managed railways. The dominant fact about the question is that the public, rightly or wrongly, would like to extend state operation and that as the ultimate proprietors of the undertaking their views must naturally prevail. Economic policy if it is to be successful cannot merely rest on the strength of sound argument: it must take into account the public psychology. It is in the nature of the case a compromise between what is desired and what is attainable. We need not go into the problem of State *versus* private management as it is only a side issue to that of amalgamation. Despite the reasons advanced by the Committee it must be pointed out that the volume of opinion which is convinced as to the practicability and success of railway grouping and amalgamations in this country is considerable. The commercial interests in the country have found in it the only means of mitigating the inequality of rating systems which vary from railway to railway. The problem of postponing amalgamations is, therefore, one beset with much greater difficulties than are stated in the Report.

Probably the Committee's observations on the subject of the Federal Statutory authority has evoked a greater criticism than might have been expected. Elsewhere problems of railway management seldom evoke so much of controversy as the result of the tacit recognition that the subject of the administration of transport undertakings is primarily a business concern. In India, as referred to earlier, the public have always felt strongly on the subject. When, the constitution of a Federal Statutory Railway Authority was proposed, discussed and adopted in the India Bill and subsequently incorporated in the India Act of 1935, the subject received the status of one of the most severely debated questions connected with the Indian constitutional reforms. The most organised political party in India, as is well known, is wedded to the principle of opposing the entire Statutory Authority clauses. It is, therefore, unfortunate that the Committee should have treaded on very delicate ground which, if not altogether outside the scope of the terms of reference, liberally interpreted, was already well on the border lines. Apparently the members of the Committee had little opportunity during their brief visit of ascertaining the public feeling on this matter and their remarks as regards political and administrative interference and the measures suggested to ensure the independence of the Railway Authority from outside influences have not helped to assuage the strong feeling which had been aroused on the subject.

Before concluding our review of the general recommendations of the report, we may refer to the observations of the Committee on the Railway Accounts and Audit Departments. On the subject of the status of the Railway Accounts Department the Committee emphasise a point of view which had been considered over and over again during the past seventeen years and discarded in favour of the present system of maintaining the independence of the status of the Chief Accounts Officer. The considerations which have largely influenced the creation of the existing arrangements are not, as assumed in the Report, merely a question of administrative organisation of a business undertaking. A State Department which, despite the Separation Convention and delegation of powers, is weighed down with the consciousness of ultimate responsibility for the conduct of the largest undertaking representing a colossal investment by it, is in the nature of the case aware of the limitations of government management, and anxious to provide adequate safeguard[illegible] ful corrective of the profit-earning incentive is, as is well known, absent in a Government Department, and the danger that expenditure without a compelling consciousness of economic justification may be freely incurred makes Government more circumspect. Detailed accounting, elaborate audit, checks and counter checks appear to be the inevitable concomitants of a government-operated undertaking. That the policy has been satisfactory is amply proved by the fact that our Railways have been singularly free from overcapitalisation which has affected the capital account of most private owned and operated railways in the world. Further, it is difficult to see how with the enormous financial stake, the Government of India could take a detached interest in railway finance. The Finance Department—the Department interested in economy—is bound to exert its control, if not directly, indirectly, to see that Government interests are adequately safeguarded. It would argue, as Sir William Meyer did before the Acworth Committee, that just as the other Departments were interested in expenditure, there must be one interested in economy. That department must in the nature of the case be the Accounting Department whose allegiance to the representative of the Finance Department, the Financial Commissioner of Railways, would give it sufficient independence to assert its point of view. In this principle of making the Chief Accounting Officer of the Railway Administration responsible to the Financial Commissioner instead of the Agent, the opinion of the Central Legislature also concurs. Given the interlacing of financial responsibility between the Government of India and the Railways and the support of public opinion expressed by the Legislature, the existing position appears to be the only course available.

The Committee's observations on the present Audit organisation have been considered to be somewhat severe and not altogether justified by the considerations referred to above. The expensiveness of the Audit Department has been commented upon by the Retrenchment Sub-Committee, and the increase of expenditure after the separation of Accounts has been acknowledged. But the maintenance of Statutory Audit on the present scale and methods has had the support of the Public Accounts Committee of the Central Legislature. To the extent that so elaborate and continuous an audit is considered desirable by that Committee, the argument against a reduction becomes less effective. The present constitutional procedure affords little scope

for any other agency to pronounce a judgment as to the extent of audit scrutiny to be enforced on the accounts of railways. The fact that the older combined system cost the railways much less is an important argument which is likely to be advanced towards effecting a reduction of cost.

If the general recommendations of the report have given rise to great difference of opinion and severe criticism, the technical part of the report has commanded support from even those who have expressed their dissent strongly on the other. In this section of the report there is a remarkably able diagnosis of the working of the different parts of the railway organisation in their principal task of the supply of transport. The report discusses in the light of a statistical analysis the record of economy during the last six years in the various departments and suggests measures for improvement. As regards the Engineering Department the achievement of an overall reduction of 20 per cent. in the expenditure is looked upon as very creditable and as an instance of real economy. The standard of maintenance of track conforms to a reasonable standard and such measures of economy in expenditure in the Engineering Department are suggested as the reduction of maintenance gangs through the substitution of mobile gangs, abolition of fencing except in suburbs and industrial areas and in the immediate neighbourhood of important level crossings and reconditioning of fishplates. An extension of the practice of autogenous welding is recommended which on foreign railways has already indicated a special field of economy in the repair of bridges, in reconditioning and building up permanent way material and in the repair of minor tools and plant. The signalling systems on our railways are found to be of a superlatively high degree of quality and cost. The signalling adopted in India, the Committee observe, "has been more expensive than the circumstances have justified." As regards colour light signalling they do not believe that India offers an extensive field for methods of this kind. They particularly recommend simpler and cheaper methods on the lines of the system in use on the South African railways. After a statistical survey of the rolling stock situation the Committee find that the percentage of locomotives and of carriages under or awaiting repair is excessive. A reduction in the percentage will enable the stock to be reduced and enable repairs to be carried out more economically. The stock of locomotives is excessive and should be capable of reduction. As they state:

> "Even in the event of substantial increase in traffic we consider it unlikely that for the present at any rate there will be need to face any considerable programme for the purchase of additional locomotives. New types will admittedly be required from time to time, even so proposals for the purchase of additional locomotives should be closely examined and the Railway Board should in particular satisfy themselves that all practical steps have been taken to make the best use of the existing stock."

Similar remarks are also offered as regards the stock of carriages. In the case of wagons also the stock is regarded as high though not to so marked an extent as with locomotives and carriages. It is proposed that uneconomic locomotives, carriages and wagons should be scrapped and should not be replaced so long as the rolling stock is excessive. The Committee visited all the principal railway workshops and found that they "are generally of ample sizes and well equipped" but:

> "the methods of production are not uniformly good. For example, although the works are suitably equipped for the purpose the out-turn of rolling stock undergoing heavy repair occupies too long and in the case of locomotives the out-turn is based on a 30 day schedule which compares unfavourably with the British standard of a 20 day schedule. The time occupied in heavy repair of carriages and wagons is also found to be capable of substantial reduction."

Other recommendations relate to the amalgamation of shops for concentration of works in the matter of construction; but as regards repair and overhaul work they consider it desirable to leave it in the hands of individual administrations. A greater amount of freedom for the adjustment of the number of staff in accordance with requirements is considered necessary. As regards supervision it is found "in many cases defective" particularly where modern machine tool plant is in service. The Committee's remarks as regards the necessity for keeping up the European supervisory staff have evoked adverse comment and it has been felt that the criticism of the Indian supervisory staff is not deserved.

The conclusions and recommendations as regards the Traffic Department deserve special notice. Greater efficiency and economy, the Report states, could be attained by the acceleration of passenger trains whose average speed for the long distance expresses is considered low having regard to the wide gauge and

the relatively easy gradients. It is recommended that "the whole process of accelerating the passenger time table be taken in hand on more thorough lines than hitherto with the object of securing the best possible use of rolling stock as well as providing a better service to the public." Similarly the goods services are also to be accelerated and relaxation as to maximum load is suggested to ensure greater speed of movement. As regards transit of traffic, 100 miles per day is regarded as a reasonable figure, but "this is far too low an average; distances from 300 to 360 miles per day are commonly attained on the 3′ 6″ gauge in South Africa over distances comparable with distances in India." The Indian railways should maintain in the case of through long distance traffic an overall speed of not less than 10 miles an hour or 240 miles per day. Other proposals relate to improvement in connections, more rapid turn-round of freight wagons and reduction of staff at stations.

As regards further possible economies continuation of the work of the Economy Research Committees is recommended on such matters as the working out of unit bases for increasing work done by the permanent way maintenance and station staff, the examination of all clerical work, more intensive use of rolling stock, the review of the system of wagon interchange and the examination of printing costs. Closing of the New York office of the Central Publicity Bureau is proposed as the expenditure is not considered justified. More rigorous control is to be exercised as regards future proposals for capital expenditure.

The report offers certain remarks on the proposals relating to an all round reduction of salaries and wages. The Committee recognise that a judgment as to the proper standards of compensation in relation to work would demand a separate, detailed and even exacting enquiry. An answer to that problem is deemed as being outside the terms of their enquiry which is limited to only the consideration of the desirability of the reimposition of the emergency measures enforced from December, 1931, onwards up to 1935. The conclusion, they state, is that whatever might have been the argument as to the restoration of the cuts partially in 1933 and fully in April 1935, the conditions of railway finance during 1936-37 did not justify a reimposition. The Committee also find little justification for a reduction in the salaries of the gazetted officers. As regards the application of the new scales of pay it is considered inequitable and undesirable to apply them with immediate effect to the existing staff or on their promotion from one class to another. The Committee feel that there has been excessive reduction in the administrative posts which should be rectified. They also recommend the revival of the appointment of a Traffic Member of the Railway Board. Some uncertainty is expressed as to whether the new scales of pay were in effect too low to obtain the right type of recruit and the Committee state that:

"they have been informed that the new scales have been found to be definitely too low to attract the skilled European staff required in the workshops. It is, therefore, doubtful in our view whether the new scales will prove adequate for the recruitment of Europeans for the gazetted ranks.... ....The situation should, therefore, be closely watched and if the authorities find difficulty in securing a first class European recruit some steps should be taken to revise the scales of pay offered."

Turning to the present methods of purchasing railway stores the Committee see "no reason to perpetuate a duplicate system of purchase for the major stores which could be bought in the cheapest market with a reasonable leaning in favour of the indigenous commodity," and advocate an extension of the use of the Indian Stores Department. The function of the Stores Superintendent should cease by degrees to that of a purchaser of stores and should be approximated gradually to that of a store-keeper. The need for more adequate control of different station stores is emphasised. Joint Research by the Indian Stores Department and the Standards Office is recommended.

With the restricted scope for further economy in railway expenditure the report looks for improvement in the prospects for increased revenues. Here the railway organisation seems to be inadequately adapted. The Committee find that the Commercial Department of the railway administrations is not properly organised for its tasks. The status of the Chief Commercial Manager is to be at least equal, if not superior, to that of the head of the Operating Department and the Department under his charge is to assume responsibility for the rates and fares for traffic development, for research activities, advertising and publicity. The importance of proper selection and training of staff is emphasised and the Committee state that "consideration should be given to the desirability of careful recruitment in Great Britain at least for some of the higher posts". "It does not" they add "appear to us that specialised Indian experience is essential; indeed for the proper development of the department it is in some respects a disadvantage" a view which is rather surprising and different from that of the Hammond Report for the Ceylon Railways proposing the recruitment of the Commercial Manager from amongst the business circles in Ceylon. The extra expenditure involved in the strengthening of the Commercial Department would, it is considered, be amply justified.

There is a separate chapter on the subject of rates and fares. The Committee do not find any justification for a general increase or a general reduction in the standards of rates and fares. The possibility of an increase is considered necessary only in a period of general prosperity and high prices. But there seems to be room for minor adjustments such as an increase in the surcharge on coal. The wisdom of the coal rebate is doubted and the imposition of a countervailing duty on foreign coal is suggested to meet the competition. On the rates system the Committee examine in some detail the criticisms advanced by the public. While the present classifisation is reasonably uniform the application of the schedules, they find, reveal considerable differences on individual administrations. The railways are asked to recognise the force of the charge of needless complexity which are not altogether unjustified. As regards the demand for continuous mileage, no wholesale reorganisation is considered desirable and quotation of station-to-station rates is recommended to meet hard cases. The complaints about the risk rates—that the difference is in excess of the actuarial value of the risk involved in the railway risk rates as compared to the owner's risk rates—are considered justified and a voluntary adoption of the solution effected by the British railways is recommended. Better facilities for rate quotation than are obtainable at present, elimination of delays are also discussed. The commercial opinion has been insistent as regards the transformation of the Railway Rates Advisory Committee into a Rates Tribunal while such a change is not favoured by the report. A liberalisation of the procedure enabling more direct resort to the Committee and wider publicity to their proceedings are recommended. Referring to the allegation of preferential treatment of import and export traffic, the Wedgwood Committee observe that this should have been dealt with by the Rates Advisory Committee which, however, has not come to be regarded in the same light as the British Railway Rates Tribunal which would have dealt with a complaint of that sort.

A detailed examination is made of the subject of road and rail transport. Starting with the statement that no restriction should be imposed on road transport which would unfairly hamper its development the report argues for an immediate reform of the present inadequate and chaotic conditions. The principles of the regulation of road transport are to be laid by the Central Government and carried out by the Provincial Governments. The recommendations relate to the regulation of buses and lorries in the interest of public safety, the issue of licences in accordance with public need, the fixing of time tables and fares for passenger vehicles, regional licensing for goods vehicles with a statutory provision for the regulation of goods rates at a future date. Other measures relate to better police control, proper records of road traffic, uniformity in motor vehicle taxation. As regards the relation between the railways and the road vehicles the Committee do not endorse the railway proposal that road services be so regulated that they shall not compete with the railways. It is considered a matter of regret that railways have made no attempt so far to establish themselves on the road and all railways are asked to examine with least delay the possibility of engaging in passenger road services and place their proposals before the provincial governments, such services relating to competitive as well as feeder services. Railways should not engage in competition with freight road services and the participation of the railways in road transport may either be direct or by obtaining a financial interest in established services. Failing a mandatory act, the Motor Vehicles Amendment Bill is to be so amended as to include all the principles stated in the report and passed immediately. Certain counter measures are proposed for the railways to meet competition. These relate to fast passenger trains, better connections, more intensive services and improved amenities for the lower class passengers. The Committee doubt the mechanical efficiency of the traffic value of small self-propelled units. Deprecating any wholesale reduction of fares to meet road competition they suggest local reductions to meet specific cases of diversion or threats of diversion. As counter measures against road competition for goods traffic, special attention is drawn to the institution of fast goods trains, more expeditious handling of goods at sending and receiving stations, simplification of clerical formalities, development of collection and delivery services, introduction of registered transit service, use of containers and of railway-owned

refrigerator trucks. The importance of the Committee have attached to public relations is indicated in the separate chapter they have devoted to it. After referring to the general unpopularity of railways in India as elsewhere, the Committee draw attention to the necessity of improving relations with the public. The railways at the present moment

> "must be more assiduous in creating popularity than any ordinary commercial undertaking.......Cogency of argument will not help them unless they are able to command a large measure of popularity, or at least of popular respect. This they have not got at present and it is not too much to say that as matters stand they cannot look for a fair hearing in any quarter outside their own offices."

For securing improved relations with the press, a Press Liaison Officer with an adequate staff is proposed with such duties as maintaining touch with the press both the English and vernacular, supplying information and articles about railway activities or railway earnings, prevention of the publication of false or exaggerated reports to the detriment of railways by inducing editors to consult the office before publication, arranging interviews, social meetings, press trips or functions, etc. Similarly cordial relations with papers in the Provincial Governments are to be maintained by more frequent touch with the different interests.

It is not possible within the limits of this review to refer to the observations and recommendations of the Committee on such matters as the Railway Board's statistics, the statistical organisation, staff discipline and training and other matters relating to the detailed working of the railway administrations. That the Committee have accomplished a substantial work is obvious to every reader of the report. In appraising the value of the report it should not be forgotten that the members of the Committee were foreign railway experts and they have had to cover within the space of about ten weeks a very large ground in examining the affairs of a transportation system of continental dimensions. There would necessarily be limitations to the appreciation by a Committee of foreign experts on certain aspects of the problem. Their contacts were mostly with the railway administrations themselves and certain commercial organisations. Largely due to the circumstances under which they worked and probably to lack of opportunities to ascertain the general public feeling, certain of the proposals have aroused great difference of opinion. The principal advantage to be derived from an enquiry by foreign experts consists in their detachment, experience of foreign railway working and the freshness of the point of view they bring to bear on the study of Indian railway problems. In this respect specially on the technical parts of the report they have given valuable suggestions. The real value of an enquiry of this type lies in our securing an impartial judgment as to the soundness with which our railways work and the conformity of their practices with the methods approved as sound and efficient from the point of view of the experience of the foreign railway systems. It is re-assuring to know that the Indian railways on the whole disclose as good a record as any other foreign railway system in the world—perhaps even better, judged from the low rates and fares and the greater financial stability during the depression—and that their management is generally on efficient lines.

L. A. NATESAN.

OUTSTANDINGS ON THE EAST INDIAN RAILWAY

The idea, at one time, had taken firm root that the disposal of disputed station debits called for qualities sui generis, *that, from its very nature, the Accounts Department had to adopt an attitude of hostility towards the station staff and that, therefore, it was necessary to interpose between the persecutor and the persecuted a solid executive wedge as the custodian of the latter's interests. It took a good deal of time, tact and persuasion to efface from the mind of the executive this erroneous impression. The clearance of outstandings, at all stages, is a normal function of the Accounts Department and the idea of an inherent antipathy between the Accounts Department and the station staff is wholly illusory. The article printed below gives a brief description, by writers who were actually connected with the work, of the various stages in the transference of the control over 'outstandings' from the Commercial Section of the Agent's office to the Accounts Department, until the attainment of the final consummation, the abolition of a separate section for the clearance of disputed debits and the absorption of this work by the Traffic Accounts Department as a part of its ordinary duties.*—Editorial note.

For all transactions conducted at a station, the Station Master is required to render a proper account to the Chief Accounts Officer, to whom he should also explain all discrepancies and deficiencies pointed out in the account rendered. On the E.I.Ry. however, the Chief Commercial Manager at one time functioned as the arbitrator or intermediary between the station and the Accounts Department, in clearing outstandings and in the settlement of disputes arising out of debits. For this purpose, he maintained a separate set of staff, in the headquarters office, consisting of a Junior Scale Officer, three Supervising Upper Subordinates, twenty-two Inspectors and fifty-five clerks, whose duty it was to receive from stations their remarks on the error sheets issued and pass them on to the Audit Office with recommendation as to the admissibility or otherwise of the remarks offered. The cost to the Commercial Department in maintaining this Section was roughly Rs. 9,75[illegible]

2. Speaking generally, the attitude of this Section, maintained by the Commercial Department, was to arbitrate between stations and the Audit Office in matters pertaining to the clearance of outstandings in general and of debits raised by Audit in particular. For this purpose, the Inspectors of this Section visited every station periodically and undertook to help the Station Master even in the minor details of his work, such as in formulating his objections to audit debits, fixing individual responsibility, in reference to station records, for admitted debits, enforcing payment by the staff responsible of such debits, etc., with the result that stations began to feel that it was not expected of them to take any action that might lead to clearance of outstandings if the stations had acted on their own initiative. In short, the tendency on the part of the Station Master was to remain inert, after showing the outstanding items in his monthly outstandings list, just for so long as it took the "Outstandings Section" of the Commercial Department to settle their cases for them with the Accounts Department. The Audit Office, on its part, felt complacent that it had done all it should by pointing out defects and irregularities in the accounts and returns furnished to it, through error sheets issued against stations and no more bothered itself to know about the subsequent adjustments of its error sheets except when specially addressed by the "Outstandings Section" in individual cases. It also happened not infrequently that the remarks received in the Accounts Office in regard to error sheets issued, though purporting to be from Station Masters but in reality from Outstanding Inspectors who visited the stations perhaps for a day or even for a few hours, lacked the authenticity and lucidity expected from those concerned in the transactions under dispute, which necessitated further references and verifications by the Accounts Department through its own Inspectors.

3. The existence of a separate and costly organisation like this, to function merely as a post office, not a very reliable one at that, attracted the attention of the Railway Board. At a conference held in their offices at Delhi, in March, 1931, at which the representatives of the Accounts and Commercial Departments of this Railway, as also of the Railway Clearing House were present, the question was discussed at length and it was unanimously resolved that the Chief Accounts Officer, E. I. Ry. should take steps to reduce the cost of the work by no less than 75 per cent., an end, which in the opinion of the Conference, could be achieved by having the Section immediately transferred to the control of the Accounts Deptt.

4. With effect from June 1, 1931, therefore, the Section commenced to function under the Chief Accounts Officer, and existed for some time as a separate unit of the Accounts Department as an experimental measure. In August 1935, the Section was altogether abolished and the entire staff was rendered surplus.

5. The work of the Section, after its abolition, was, so far as it related to dealing with and clearing *local* debits outstandings, distributed amongst the several checkers in the Traffic Accounts Office. As these checkers were already corresponding with stations in the course of their preliminary enquiries, prior to issuing error sheets, the further correspondence in bringing cases to finality, after the issue of error sheets, imposed upon them no appreciable additional work. The work of dealing with and clearing debits raised on *foreign* traffic was similarly asked to be undertaken by the checkers in the Railway Clearing Accounts Office, but the Director declined on the plea of insufficiency of staff. For this work, as also for comparing the successive months' outstandings lists received from stations, a staff of six Inspectors and 18 clerks from amongst those rendered surplus was retained in the Accounts Office. The duty of this remnant of the defunct "Outstandings Section" is to keep in Ledgers a record of all station outstandings and to communicate the station objections to the Director, Railway Clearing Accounts Office, in regard to the debits raised by him. It is also its function to keep a general watch over the clearance of the station outstandings by the departments concerned, for example freight outstanding by the C.C.M. and wharfage and demurrage outstandings by the Divisional Offices.

6. With the disbandment of the "Outstandings Section", the duplication of work which the triangular correspondence necessarily gave rise to, has almost been eliminated, and a more direct contact has been established between the Accounts Office and the Stations. The indifference and disinterestedness which were rampant among the station staff in the matter of outstandings are disappearing though slowly and clearance of outstandings, though it cannot yet be claimed to be satisfactory, is being effected more expeditiously than was possible in the past. The remnant of the late "Outstandings Section" retained in the Traffic

Accounts Office, has however to continue its separate existence till such time as the Director, Railway Clearing Accounts Office, finds it convenient to undertake his portion of the work, and the stations and other departments concerned realise their obligations, the former by rigidly observing the rules and orders regarding payment of acknowledged debits, shortages in booking, cashier's memo., etc., and the latter by promptly sending to stations their Remission Orders, etc., whenever they waive, to facilitate deliveries, such charges due as wharfage and demurrage.

E. DEBEAUFORT AND K. SESHACHARI.

TRANSPORT DEVELOPMENTS IN AMERICA.

II.

Among the other principal studies initiated by the Federal Coordinator's organisation may be mentioned the Sales Study. The Section of Transportation Service brought out its report on Traffic Organisation in which it examined the methods used by the American railways in promoting, soliciting and selling traffic, the costs and results thereof, and the character of the personnel. Detailed comparisons were made with modern sales methods used by other large industries and lines were indicated whereby through greater cooperation with each other and further better organisation methods and the selection and training of personnel, the railway administrations were expected to secure better results at less expense. The railway traffic department has to meet new conditions which have arisen and it is in need of a thorough re-organisation. This, of course, it is recognised, cannot be achieved overnight and might require years, even a generation, for its accomplishment. But the form it should assume was indicated by the report as follows:—

> The present functions should be systematised and committed to a single agency;
>
> The sales functions should be integrated into a limited number of carrier groups;
>
> Selling should be planned and directed by the central staff rather than left to the salesman's self-activation;
>
> Sales efforts should be generally supplemented by a thorough and continuous advertising programme;
>
> The employees' standard should be raised by the use of a modern personnel programme, and employees and officers should be constantly informed about the carriers, about their patrons and particularly the business of the latter, and should be given technical and professional training and education.

The Section on Terminal Unification undertook an enquiry into the possibilities of economy through unification of terminal facilities and operation at places served by two or more railways. The basic work involved was, of course, done largely by the numerous committees of railway officers. It was estimated that without detriment to service as much as $50,000,000 annually could be saved by terminal unifications which are physically possible and that this amount could be materially increased if coordination of service were extended beyond the terminal districts. There were obstacles in the way of accomplishing such unifications, apart from the restrictions on the reductions in railway employment imposed by the Act, particularly the keen competition of the railways at the larger points, the fears of individual railways as to the possible losses of certain strategic advantages over competitors which they now enjoy, including even the goodwill of the shippers built up over a long period of time, and legal and other adjustments entailed in the various contracts and arrangements. But the difficulties are by no means insuperable given time and negotiations. At three typical places such negotiations have at the instance of the Coordinator been undertaken.

Another problem which held out hopes of considerable economy was that of the unification of shops which was dealt with by the Section on Regional Operations. The Section surveyed the shop situation in each region in determining the economies possible through concentrating work in the better located and equipped shops and introducing modernised methods. All available statistics on the subject of maintenance and of equipment were analysed and a detailed survey was made of one large railway shop which was considered fairly typical as to the age and condition of machinery and somewhat above average as to general arrangement and character of buildings. Maintenance of equipment expense on the American railways averages more than 27 per cent. of all operating expenses and offers a most important field for effecting substantial savings in total operating expenses. It is interesting to note that the Section found that the existing railway repair facilities include an unduly high proportion of obsolete buildings, machinery and accessory equipment; that the continued use of these obsolete facilities resulted in high costs of maintaining equipment, not only in respect of work to actual work performed but also in respect to the quality of the work; that mere consolidation or joint use of existing major repair shops without installing new machinery will result in comparatively small savings; and that savings through the use of modern machinery represent only about 20 per cent. of total savings estimated to be possible through complete modernisation of shops together with establishment of sound policies in respect to the condition of equipment and maintenance schedules.

The Section of Purchases discussed the possibilities of savings to be obtained by the standardisation and simplification of railway equipment, materials and supplies. Economies in prices even greater than those anticipated were disclosed as regards cars, rails, lumber, coal and a few other articles. The six groups of purchasing officers, regionally organised for the review of purchases together with a National Purchasing Advisory Committee were, among other things, to combine certain purchases and secure the benefit of discounts, avoid burdensome contracts for the replacement of parts of patented articles and furnish purchasers with advance information of prospective needs enabling better prices to be secured.

A subject closely related is that of the disposal of scrap. A comprehensive study was instituted on the methods followed by the railways in the reclamation and sale or other disposal of scrap material. An increase of 15 per cent. in net realisation from the sale of scrap alone would amount to more than $4,000,000 annually on the basis of 1933 transactions. After a very careful review of the practices on the individual railways it was found that the railways can obtain better prices by a properly classified scrap to highest quality groups. In the case of Heavy Melting Steel No. 1, which is ready for the consumer's use in most instances, the prices received were found to be so low as to permit the roads to spend the necessary cost of a complete preparation and still realise a larger net return per ton of scrap. If that were done the Class I railways which sold 6½ million net tons of 15 different classes of ferrous scrap the railways would have realised $1·3 millions more and a net increase of over half a million dollars. Again, it was found that the railways lost money on scrap equipment sold on wheels. Sale after individual or joint dismantling would have increased the yield. The investigations of the Committee disclose large possibilities of economy through concentration of sorting and dismantling operations and from the sale of scrap through group melting. The difference between the prices paid by the consumers and the value received by the railways amounted on the ferrous scrap sold in 1933 by the Class I railways to $1,600,000.

The Mechanical Advisory Committee which was headed by an engineer, not in railway employment and selected by the Coordinator, engaged their attention in determining the type of cars which seemed to offer most promise in the light of railway experience and present practice and upon which attention can most readily be concentrated by the railways. The report was completed at the end of 1935 and has been recently released by the Association of American Railroads. The Report of the Committee deals with steam motive power, internal combustion locomotives, railway electrification, freight cars, containers, various types of rail-highway vehicles, passenger cars, rail-motor cars and streamlined trains. The problems connected with these subjects have been discussed exhaustively. In the case of steam locomotives, the designs for 61 types acquired since 1925 have been reviewed. The economics of locomotive life and replacement, locomotive characteristics and a consideration practically of all of the combining parts of the machine have been dealt with in the section of locomotives. The freight car sections of the report appear to be especially comprehensive. Such problems as the reduction of tare weight, the methods of the economic evaluation of light-weight freight car construction materials and methods of construction, nonharmonic springs, roller bearings, wheels, brakes, couplers, draft gears and various special types of cars have all been dealt with in detail. Similarly the subject of the passenger cars and such problems as concern them such as light-weight coaches, implications of high speeds, air resistance materials, restrictions, etc., have been examined no less thoroughly.

The existence of many thousands of joint roads, methods of car interchange, loss and damage settlements and numerous other matters which give occasion for large complicated inter-railway accounting between railways were also investigated by the Federal Coordinator's organisation.

We have stated enough to indicate the diversity and the comprehensiveness of the Federal Coordinator's investigations. It is impossible to do justice to the wealth of information or the ability with which they have been digested and discussed.

III.

Apart from these special studies the Federal Coordinator was also required under the Emergency Act to recommend further legislation for the improvement of transportation conditions generally. The Coordinator transmitted four major reports to the President and Congress and three minor ones. The first

report* which was transmitted on January 20, 1934, considered the need for "A radical or major change in the organisation, conduct and regulation of the railroad industry which can be accomplished by federal legislation". It reviewed the principal railway ills, the financial situation, management and operation and public regulation. The Federal Coordinator discussed the advantages and disadvantages of public ownership and operation and concluded that public ownership and operation could go further than any other plan to solve known railway ills but that it would involve serious financial strain to the country under the conditions then present. The Coordinator was not prepared to recommend a grand consolidation plan which would require new legislation and might precipitate a controversy involving railways, many communities and labour. Another disadvantage is that such an attempt at consolidation would have to be compulsory. Discussing the advisability of compulsory consolidations in the light of the so-called "Prince Plan" Mr. Joseph B. Eastman stated that the economies by such a plan would not be nearly as large as claimed and that in other respects it would not be in the public interest. Somewhat more hopeful was the prospect of the improved coordination plan.

In a further report† dated February 28, 1934, the Coordinator dealt with two questions:

1. Is there need for Federal Legislation to regulate transportation agencies other than the railroads and to frame a proper co-ordination of all means of transport?
2. Is there need for amendments to Federal Statutes to improve details of the present system of regulating railroads?

After examining the Water, Motor, Air and Pipeline transportation, Mr. Eastman found that since 1920 the transportation facilities of the country had expanded enormously. Capital about equal in importance to the total invested in the railways in that one year went in one way or another into the progress of other means of transportation and the railways themselves increased their own investment nearly by one-third. This has brought about a bitter struggle for traffic both between the different forms of transportation and within each subdivision of the group which has further been intensified by the depression. This situation, he said, "not only imperils the financial stability

* Senate Document, No. 119, Seventy-third Congress, Second Session.
† Senate Document, No. 152, Seventy-third Congress, Second Session

of the national transportation system but it threatens the wages and working conditions of labour and it creates a demoralisation in rates and wages which in the long run is a menace to commerce and industry. Whereas the railways were subjected to a comprehensive system of public regulation, the other agencies are regulated much less thoroughly and to a considerable extent not at all by the Federal Government." The only remedy to end a threatening chaos is found to be the regulation of all forms of transport which will "find their proper functions, direct them in the performance of these functions, prevent wasteful duplication of service without eliminating such competition as is economically sound, and permit a system of stable rates which will reflect the lowest costs of goods service to afford the necessary foundation for credit." The Co-ordinator accordingly proposed a bill for the regulation of water carriers, a bill for the regulation of motor carriers and bills proposing miscellaneous additional amendments to the Interstate Commerce Act.*

The first two bills were unanimously approved by the Interstate Commerce Commission and as regards the third the approval was not unanimous on account of two members of the Commission not concurring in an amendment of the fourth section of the Interstate Commerce Act.

In the third report forwarded on January 30, 1935, Mr. Eastman adverted to the general railway problem discussed in the first report envisaging railway transportation as part of the general transportation system. The problem was one of leaving the system of transportation "in the hands of reliable and responsible operators whose charges for service will be known, dependable and reasonable and free from unjust discrimination. This objective can be attained only if there is provided some centralised control which will concern itself with planning and prevention and cure all evils when they arise, proper coordination of facilities, institution of sound general policies affecting both service and roads, the elimination of unnecessary duplication and waste." In order to accomplish these objectives three broad general methods

* Under this may be grouped a bill for the reorganisation of the Interstate Commerce Commission; a bill for dismissal compensation for railroad employees displaced through coordination projects; a bill providing for a revision of section 77 of the Bankruptcy Act regarding railroads; and four bills proposing miscellaneous additional amendments to the Interstate Commerce Act.

are examined. The first adopts the conservative principle of reliance on private capital and enterprise; the second invites the use of governmental power to compel a very radical change in railway conditions but still preserves the principle of private ownership; and the third departs from this principle and makes railway transportation a direct function of government. After examining in great detail the relative merits and demerits of these three plans it is concluded that the last one contains "the greatest potentialities of good and at the same time the greatest possibilities of harm under present conditions, particularly as it would be essential to its successful operation that the public trustees be given an absolutely free hand and that they should not be under the domination or control of the political branches of the government. Only an enlightened and sustained force of public opinion could accomplish this result." The Coordinator has seen no advance as yet of the development of a sufficiently strong body of public opinion of this character. It may be developed but it has not reached the stage of fruition. It would be dangerous to take so far-reaching a step until the country is prepared to welcome it and lend it protection which is essential to its success. The second plan is dismissed as being neither desirable nor feasible. As regards No. 1, it is stated that it has neither potentialities for good nor the possibilities of financial harm which characterises plan 3. Its greatest fault is that its good result will be accomplished rather slowly. Under present conditions the Coordinator is, therefore, content with recommending plan 1.

The third report modified in the light of further studies certain details regarding the Motor Carrier and the Water Carrier bills recommended in the previous report.

The proposals made by Mr. Eastman in the second and the third report were with amendments incorporated in the Motor Carrier Act approved on August 9, 1935. The principal features of this Act have already been reviewed in some detail in these pages.

The bill which provided for a revision of Section 77 of the Bankruptcy Act was also enacted in an amended form. In this Act material changes were made in the procedure of the Interstate Commerce Commission in Section 77 according to which the debtor railway is required to file a plan of reorganisation within six months of the date of approval of its petition by the Court or within six months of the effective date of the amendatory act unless the time is extended by the court for causes shown. Under this provision all carriers whose petition under the section have been filed upon the effective date of amendment will be required to file plans on or before February 27, 1936, or request for extension of time for filing. The situation before the change was that no plan for reorganisation could be confirmed by the court without the acceptance of two-thirds of the creditors and stockholders of each class unless the nonfriending group was provided for in other ways. According to the amendment this requirement has been relaxed to the extent that the court may form a plan without such acceptances if satisfied amongst other things that the plan makes adequate provision for fair and equitable treatment for the interests or claims of those rejecting it. Another change in the procedure is the omission of the provision for the re-election by the Interstate Commerce Commission of a panel of standing trustees for a provision for the appointment of trustees by the court subject to the ratification of the Commission. The new provision also authorises the court to request that the Commission report to it any facts pertaining to irregularity, fraud, misconduct or mismanagement as a consequence of which a debtor may have a cause of action arising therefrom against any person or corporation. Certain sub-sections have also been adopted to protect the debtors' estates from wasteful or extravagant expenditure in connection with the reorganisation proceedings.

The bill to include ports and gateways in the protection of Section 3 of the Interstate Commerce Act against undue preference and prejudice was also enacted. The bill for federal regulation of Water Carriers was not proceeded with.

REVIEWS.

The Tourist Industry: By A. J. NORVAL. (London: Sir Isaac Pitman & Sons, Ltd., 1936. Pp. 343, Price 12|6 net.)

The scope of Dr. A. J. Norval's book is better indicated in the sub-title: "A National and International Survey". Originally undertaken purely as a matter of scientific research it was "subsequently conducted on behalf of the Government of the Union of South Africa and on behalf of the South African Railways and Harbours .... to determine the economic significance of the tourist industry to South Africa its relative value in the national economy, its potentialities, the possibility of its future development and the means by which, and the channels through which, this can be accomplished in such a way as to yield the maximum benefit to the country." The author has collected information from all possible sources both from the published literature and through a liberal use of the questionnaire method.

The author first of all presents a summary of the tourist or travel movement from the earliest times. It is, in fact, towards the end of the last century up to the outbreak of the world war in 1914 that the tourist movement had assumed considerable dimensions and surpassed anything of its kind ever known in the history of the human race. Many countries of Europe such as Austria, France, Italy, Norway, Switzerland and others were at that time deriving very substantial incomes annually. The number of visitors to the pre-war Switzerland was estimated by experts at 350 to 450 thousands with an annual expenditure, for hotel accommodation, purchases of travel mementos, postcards and souvenir jewellery, of 200 million francs. But it was reserved for the post-war period to witness a further expansion and in fact, a democratisation of the tourist movement.

The author states in the preface that the enquiry has revealed a phenomenal development in tourist traffic in many countries since the Great War, its immense economic importance national and international; the important bearing that it has on the life of the nation economically, sociologically, culturally and politically; its significance as a factor in the development of foreign markets, the investment of capital and in the encouragement of immigration of the right kind; the growing realisation on the part of national governments for these and other reasons of the necessity of assuming the control and direction of the tourist traffic to the country; the vast number of different measures adopted by governments and others in order to encourage tourist traffic and to develop it to its maximum in every possible way.

Several causes have contributed to the remarkable development of tourist traffic during recent years. The depreciated currencies of several of the European countries rendered it possible for tourists from countries with relatively stable and appreciated currencies to travel at greatly reduced expense in those countries whose currencies were depreciating from day to day. Travel came within the range of the ordinary individual with the inevitable result that countries such as Austria and Germany and later Italy, France and Belgium were literally overrun by a class of tourist who had never before passed beyond the borders of his own country. And the expenditure of the tourist benefited considerably the countries which had budgetary embarrassments. The importance of the tourist industry has been so generally recognised that organised efforts have been made to develop further traffic, to arouse and stimulate the desire for travel and to remove certain impedimenta such as the difficulty of foreign languages by a more general use of English, French or German, the relaxation of passport, immigration and customs formalities and more sympathetic treatment from the nationals themselves. Dr. Norval has given in the second chapter a statistical survey of the tourist industry in different countries. He has given valuable information as regards the number of tourists, the estimates of expenditure in the countries visited in Europe, the United States and Japan. The significance of the tourist industry in the economic lives of many countries may be gathered from the fact that some of them would be very seriously hit by any reduction in the number of the visitors. Many of them have invested in industries which are associated with the tourist industry such as the hotels, restaurants, transport, etc., enormous sums. Switzerland, it is stated, has invested approximately 2 million francs in her hotel industry and approximately 1|7th of her national income in normal years is obtained directly or indirectly from her tourist traffic which is in the neighbourhood of 500 million gold francs. France, Germany and Italy are also no less zealous in attracting the

foreigner to their respective centres and make them stay as long as they could. The author now turns to consider the tourist industry in South Africa. He finds that the possibilities are great to develop the tourist industry more extensively and that it should be treated as a national industry if it is to be developed on right lines.

We have next an estimate attempted by Dr. Norval of the economic, political and sociological significance of the tourist industry. Economically the tourist exercises a much greater influence than is suspected. It has been found that on an average the tourist expenditures are distributed in a ratio of 26 per cent. on purchases, 21 per cent. on meals and refreshments and cafes, 17 per cent. on hotels, 7 per cent. on the theatres and amusements and 30 per cent. on transport, etc. If a more detailed analysis of the expenditures under these groups were undertaken it would be found that on final analysis they tend to percolate into every division and sub-division of the national economy. There were also other influences such as the development of foreign markets such as in the case of the cosmetic exports from France to the United States built largely on the tourist traffic from the United States to France. In the light of these general considerations when the determined factors in the tourist industry in South Africa are considered it is found that with its attractive climate, natural and scenic beauty, the presence of primitive and natural forms of life, diversity of fauna and flora, she offers a variety of important attractions for every class of tourist. One of the vital factors in building up or maintaining the tourist industry is a proper organisation of the hotel industry. The manner in which the development of the hotel industry has reacted on the tourist movement is examined in the light of the experience in Europe, and the author has some interesting suggestions to offer on the subject of the supply, control and management of hotels in South Africa where the accommodation is stated to be lower than would be necessary. In the last two chapters there is a survey of tourist-promoting organisations in the principal countries of the world and in South Africa in some detail. The author favours the creation of a National Tourist Bureau to act as the chief executive organisation of the government in all matters related to the tourist traffic.

Dr. Norval has written a remarkably able book on what has been largely unexplored field. With the exception of F. W.

Ogilvie's book on the "Tourist Movement", there has not been any comprehensive and scientific examination of all aspects of the tourist industry. Although the book is primarily designed to ascertain what has to be done in South Africa to develop the tourist traffic on a much larger scale, the general survey embracing the experience of the principal countries of the world presents a very large volume of interesting matter which no one interested in this industry can afford to miss. There is a good bibliography and an adequate index.

The Economics of Transport: By M. R. BONAVIA (London: Nisbett & Co., Ltd., 1936, pp. x + 202).

Mr. Bonavia's book forms the latest edition to the remarkably well-written series of the Cambridge Economic Handbooks. In appraising the value of the contribution made by this work to the literature on transport it should be borne in mind that the object of the series "is not directed towards making original contributions to economic science" but "to expound its elements in a lucid, accurate and illuminating way." It is primarily designed to afford the uninitiated student or the ordinary reader some conception of the general principles of thought. We are then to expect from the work, a general text-book on the subject of transport, the technique of thinking "which helps its possessor to draw correct conclusions."

Within so short a compass as six chapters Mr. Bonavia has succeeded in elucidating some of the most difficult and the complicated of modern transport problems. The book opens with a brief examination of the function of transport such as the creation of utilities of place, the demand for and some social effects of transport.

The second chapter entitled "The Means of Transport" is mainly descriptive. The different forms of transport such as the sea, river, air, canals and railways are dealt with and the effects of transport on distribution are indicated. The author next passes on to consider the organisation of transport. Here the still highly controversial problem of the influence and intervention of State is discussed. After reviewing the experience of the different countries of the world the author concludes that "it is now generally accepted that public ownership yields the most favourable results when combined with the management on mainly commercial principles. The tendency is thus to turn to publicly owned transport systems into independent organisations on the

lines of commercial concerns on the co-operative principle. The community of the users of transport share in the divisible surplus but do not usually have a voice in the management."

The principles determining the optimum size of a railway system are ably discussed and the economies of large scale production attributable to the firm and to the plant clearly indicated.

In Chapter IV the author takes up the different aspects of competition in transport such as the fixing of contract prices under competition, tariffs and monopolistic competition, the influence of cost on price and the element of joint supply in the determination of the price of transport.

In Chapter V the subject of monopoly in transport is discussed in the light of the shipping and the railway freight rates. The basis of the goods classification and the ability to bear are clearly stated. Such problems as have been the result of partial monopoly such as discrimination are examined. Mr. Bonavia concludes the book with a discussion of the problems which have been brought into prominence during recent years by the emergence of competing methods of transport, namely, the control and co-ordination of transport. The necessity of placing road transport under the same system of regulation and control as railway transport has brought into prominence several new concepts such as "the legacy of the past, the social costs of different forms of transport, etc." It is stated that the present scale of taxation on motor vehicles represents principally as near an approximation to full track costs as can reasonably be expected. In other directions the road transport industry has come closer in recent years to cover its full social costs. In the more advanced countries insurance rates, national agreements covering wages and labour conditions, system of inspection of vehicles with the road motor industry "even though its social costs are still partially indeterminate" "has passed from the adolescent to the adult stage."

It is interesting to turn to the author's views on that comprehensive piece of legislation regulating the British railways, namely, the Railways Act of 1921. As an experiment in linking charges and revenue, the Railways Act has certainly not been successful as the Standard Revenue has never been earned. The Act also overlooked the change in the status of the railways from that of a monopoly enterprise into that of a competitor. Further the experience of the last sixteen years has also shown that "any system of price regulation which does not allow of some flexibility to compensate for changes in the value of money is likely to involve unfair penalties or bounties between different groups." On the whole the author finds that the British Railways Act has been more successful than the American Transportation Act of 1920 on which it was partly modelled.

No book on transport can at the present day escape from a reference to or discussion of co-ordination. The proposal of the creation of a National Transport Board, the public authority owning and operating all forms of transport, has often been suggested as the only satisfactory solution of the problem of co-ordination. But the organisation of such a body, the author holds, would present very formidable problems. "It might be possible to solve the problems of organisation and administration but it would be difficult to preserve the flexibility which is important for efficient transport service." While such a Board would be better fitted to tackle the question of ancillary road transport it would strike at the basis of charging by "value of service." The success of co-ordination depends on not only the satisfactory adjustment of the administrative details but also the enforcement of compulsory allocation of traffic.

The book provides a very stimulating contribution to the study of transport. Although it is designed for the beginner and avoids details, it does not avoid severe reasoning and would be well worth the perusal of others interested or engaged in transport.

RAILWAY ACCOUNTS.

The name of Mr. L. V. Gopalan is well known to all aspirants in the Railway Subordinate Audit and Accounts Service. For nearly a decade he has been engaged in the task of collecting and publishing questions set for the various examinations conducted for the Railway Accounts and Audit Services by the Financial Commissioner and the Auditor-General. We have just received some of his recent publications.*

With the exception of the first which was published last year, all the others have been published during the current year. There are not very many guides or help-books for these departmental examinations, and Mr. Gopalan has done a real service in bringing out a collection of the questions for a number of years and in giving solutions to some of them and adding suggestions which are likely to be of assistance to the candidates appearing at these examinations. Incidentally we might mention Mr. Gopalan's connection with the Institute as Associate Member almost from the very beginning. We recommend very cordially all these books to those interested. The publications are obtainable from the author who is Assistant Auditor, M. & S. M. Railway, Madras.

* *Appendix D Examination—Questions only*; *Book-keeping—Questions and Answers*, 1930-36; *Subordinate Audit Service Examinations—Questions only*, 1930-36; *Precis and Draft—Questions and Answers*: *Book-keeping*, 1929 *and* 1931 *to* 1936; *Precis and Draft—S.A.S. Examinations* 1930-1934 *and* 1936; *Book-keeping (Government and Commercial) Questions (S.A.S. Examination of the Mysore Railways)* 6 *years*.

OFFICIAL PAPERS.

KENYA AND UGANDA RAILWAYS AND HARBOURS.

The Report for 1936 by Brigadier General Sir G. D. Rhodes, General Manager, Kenya and Uganda Railways and Harbours, shows that the results of working during the year 1936 of the combined railway, road, harbour and steamship services in Kenya and Uganda were very good and satisfactory being an advance on those of the previous year, completely re-establishing the financial position of the administration. The improvement in gross earnings, it is stated, was due to a general increase in exports and to the very much higher price level of primary products with a resulting improvement in general business. As a result of the continuance of economy measures initiated some time back the increase in expenditure was comparatively small. The service operated consists of 1,622 miles of open lines (metre gauge) 3737 route miles of lake steamer service and 75 miles of road motor service for passengers and goods. The combined earnings of all the services for the year ended December 31, 1936, amounted to £29,86,591 an increase of £192,746 or 6.90 per cent. of 1935. The combined ordinary working expenditure exclusive of contributions to renewal funds shows an increase of 6.26 per cent. The net earnings balance of £1,265,148 over total expenditure on revenue account gives a return of 5.75 per cent. on the total capital expenditure of £21, 999,072 and of 9.09 per cent. on the interest bearing principal (£13,924,106) of this total. This balance covers interest and sinking fund charges of £850,100 leaving a surplus of 415,048. The comparative results of working the railway services (inclusive of lake steamers and motor transport services but exclusive of harbour service) are shown in the accompanying table:

		1936	1935
Passengers	.. ..	514,077	481,505
Public traffic, tons	.. ..	960,507	849,791
Train-miles	.. ..	3,008,001	2,729,821
Public freight ton-miles	.. ..	409,439,382	334,431,796
Public ton-mile receipts	.. ..	10.963 cents	12 680 cents
Average haul, public traffic	.. ..	412 miles	379 miles
Operating ratio, per cent.	.. ..	45.20	45.63
		£	£
Passenger receipts	.. ..	171,066	159,833
Public goods receipts	.. ..	2,244,245	2,120,315
Gross earnings	.. ..	2,527,158	2,384,923
Working expenditure	.. ..	1,142,276	1,088,185
To renewal funds	.. ..	351,397	336,067
Miscellaneous transactions net	Dr.	20,462 Cr.	18,791
Net revenue	.. ..	1,013,023	979,462
Loan charges, etc.	.. ..	634,363	632,301
Surplus	.. ..	378,660	347,161

There was an increase in passenger travel both in numbers and receipts under all the three classes and the total passenger receipts were the highest since 1931. There was an improvement in the parcels and luggage receipts and the merchandise carried for public increased by 110,712 tons or 13.03 per cent. whereas the receipts therefrom increased only by 5.84 per cent. This discrepancy and the fall in receipts per freight ton mile are due partly to rate reductions but mainly to the fact that about three quarters of the increased traffic was carried at low exceptional export rates. The finance of the administration is restored and it has been possible to revert to a more adequate standard of maintenance and to embark on a programme of overtaking arrears accumulated during the depression. This programme was carried on steadily during the year under report and nearly all arrears have been dealt with with the exception of rolling stock which the report states, could only be completely dealt with by the end of 1937. On the whole the report states that the year has been very satisfactory.

CEYLON GOVERNMENT RAILWAYS' ENQUIRY.

About the same time that the Indian Railways were under investigation by the Wedgwood Committee there was also an enquiry on the Ceylon State Railways by a Commission of which Brigadier General F. D. Hammond, C.B.E., D.S.O., was Chairman, Mr. J.D.C. Couper, C.B.E., Member and Mr. J.F.M. Taylor, Secretary, appointed by the Secretary of State for Colonies to report on the administration and control of Rail and Road Transport in Ceylon. A brief summary of the observations and recommendations of the Committee is given here.

Ceylon, an island almost the size of Ireland with a population of 5½ millions, has a total route mileage of 945 miles, 828 of which are on the Broad Gauge. The greatest length of the island is 270 miles and the greatest width 140 miles. There are 4,700 miles of main road and 4,600 miles of minor roads. In common with the rest of the railways of the world the Ceylon State Railways have suffered from the depression and the estimated deficit for 1936-37 is over 3 million rupees and the loss of revenue has been found to be mainly attributable to road competition. The Commission have a sorry tale to tell. Road Transport is found to be run under almost entirely uncontrolled conditions and even the existing imperfect measures do not appear to be put into operation. There are 67 separate licensing authorities with no coordination of control and since the licence fees are credited to the funds of the local bodies, the local authorities have the direct incentive to issue as many licences as possible. Although the ordinance indicates that an insurance policy shall be taken out, this section has never been put into force; fares are not prescribed, nor the number of ordinary visits restricted on a specific route. To quote the Report: "Many of the vehicles are in a dilapidated condition, and have tyres worn down, not only to the canvas, but through some of the layers of canvas as well. Drivers are employed at the wheel for 16 hours at a stretch...Solely as a result of motor bus competition murder has been committed and four men have been hanged."

The Commission, therefore, decided that a Central Authority to control all forms of road transport is imperative irrespective of the [illegible] the railway and of the interest of the public therein, and on this point there appears to be general agreement in the island. As regards the retention of the railway, the report draws attention to the capital cost of over Rs. 200 million and over 10,000 employees who would have to be compensated to the tune of Rs, 2½ millions a year. Apart from this, if it were abolished the roads would have to be improved in order to carry the ten million passengers and one million tons of goods now carried annually by the railway. The continuance of the railway must, therefore, be taken for granted.

The present organisation of the railway is criticised on the ground that it interposes "between the General Manager and the Chief Officers responsible for carrying out the work a layer of deputies who have no definite responsibility themselves". The result was the lack of cooperation between the various services. On the commercial side there has, it is stated, been a lack of serious endeavour to obtain traffic or to bring to notice the advantages of the railway. On the Operating side an intensive use of engines with consequent reduction in their number with more efficient diagramming of train cruise should be introduced. Other defects found are in the work of the control offices, unsuitability of the types of locomotives, engine failures, too many shunting engines. More up-to-date and detailed statistics are required to be compiled and overhaul of the methods of ticket inspection to eliminate fraud and a system of stamps for parcels traffic are recommended.

As the Commission was specifically asked to report on the use of electric and diesel traction they observe that there are no indications of such a large increase in traffic as would justify the electrification of any portion of the system. As regards diesel traction there is found to be no necessity for any comprehensive adoption and when new locomotives are required the pros and cons of diesel units are to be considered. The Commission find that while the standard of maintenance on the more important lines is satisfactory the speed limits are unnecessarily low. The layout of certain passenger stations is inadequate and the staff employed on track maintenance is found somewhat high. The flying gang system is recommended on an experimental basis. The three separate engineering workshops and stores for the way and works and signal branches are to be amalgamated and contract work is recommended for adoption.

The Commission state that as regards signalling the electrical apparatus including the railway telegraph and telephone systems are in charge of the Postal Department. In the absence of any individual officer responsible for signalling policy there is no coordination and expenditure on signalling equipment is found to be lavish particularly at wayside stations. Partial dismantling of the elaborate signalling school at Colombo is proposed, further training in signalling being given to the signalmen in the signal boxes themselves. The Railway Signal Engineer is to be made responsible for all signalling under the Chief Engineer.

An important section of the report is devoted to staff questions. The Commission indicate the manner in which staff can be reduced, such as in the number of firemen, guards and station and office staff. The rates of pay on the railway are found to be much higher than in firms outside. In addition to higher rates of pay the railways offer generous conditions of pensions, gratuities, paid leave, quarters and cheap travel. Despite these the railway clerical service is suffering from a sense of grievance in regard to promotion. This is attributed to the fact that its members have been recruited as civil servants and consider they should be treated in the same way as those of other branches of the civil service irrespective of the finances of the railway. They, therefore, recommend that all posts should be classified. If the railway is to have a fair chance under the competitive conditions existing it must reduce its pay-bill: the existing rates of pay were fixed by the Government. A committee should be set up in Ceylon consisting of the General Manager, two members of standing in commercial life, the Chief Accountant of the railway and one other railway officer to draw up scales of pay and conditions of service for each grade which should be applied to all new entrants. The Report concudes that compulsory retirement of many officers cannot be avoided.

The influence of the Government on the railway does not appear to have been happy and even the renewals fund which was started so recently as 1928-29 was appropriated to the general revenue. The fund now existing is only in name. The railway accounts are recommended to be completely divorced from those of the government and capital readjustments are proposed in order to put the railway finances on a sound basis. A renewals fund is also to be created in order that the railway might be organised on true commercial lines.

To eliminate the disadvantages of government control the constitution of a Railway Board is proposed consisting of five members, two elected by the Council of State and 2 nominated by the Governor with the General Manager as Chairman. The Board would be responsible for the administration and appointment of staff except those of district rank or higher which should be made by the Governor on the Board's recommendations. It would also exercise control on rates and fares. A high salary, £3,500 is recommended for the General Manager whose task of reorganising the railway and of acting as chairman of the Board will be a heavy one. They further propose that "efforts should be made to obtain from the British railways one of the younger men who are starting to make their mark. It will be necessary to quote a much larger salary than those given to the Officers of State if the right stamp of man is to be obtained. The higher posts on British railways receive much higher salaries than these, and the type of man we have in view would have a reasonable anticipation of getting to the top of the tree." An interesting proposal made is that regarding a freer interchange of officers amongst colonial railways. It is proposed that young Ceylonese railway officers should be eligible for promotion to posts such as that of district engineer or divisional transportation superintendent on other colonial railways and thus acquire the wider knowledge and experience which would qualify them to fill the higher posts on the railway in their own country. A second interesting recommendation is that the Chief Commercial Officer of the Railway, a new appointment should be recruited from the Commercial community in Ceylon.

COAL MINING COMMITTEE'S REPORT, 1937.

The Indian Coal industry is faced with two important problems requiring immediate action. The first relates to measures for the national conservation of coal resources, and the second is the urgency of applying measures for safety in view of the frequency of accidents in the Bengal and Behar coalfields with high fatality during the last three years. Early in 1936, Sir Lewis Fermor, the late Director of the Geological Survey of India, drew public attention to the "very serious question of the certain premature exhaustion" of India's coal reserves under present methods of extraction and the prospect of "a national disaster of the first magnitude". The Coal Mining Committee which was appointed in October 1936, to enquire into these two questions, have recently published their report. The Committee estimate the life of the reserves of the good quality coal at 122 years and the life of the reserves of coking coal of good quality at 62 years under the present method of exploitation and standard of consumption. With such limited reserves as these the need for eliminating waste is imperative. The report states that the average waste, taking it in the sense of underground waste only, is as high as 50 per cent. due to sections left, actual depillaring and fires and collapses. Of this all but 10 per cent. could be saved by proper stowing. As "the Coal industry and trade is now in a parlous plight from which there seems to be no hope of extrication by its own efforts," the case for State control is considered very much stronger now. The Committee want a Statutory Authority of experts to exercise extensive and detailed control over present methods of extraction. Compulsory sand-stowing is put forward both as the principal safety measure against imminent danger to life from gassy seams, fires, crushing or premature collapses, and as a measure for increasing the life and productivity of the collieries. As this may involve too great a financial strain to the owners, state aid is to be afforded in carrying out stowing through the Statutory Authority, the cost being met from out of a general cess on all rail-borne coal and hard coke. The distribution of sand is to be done by a public supply company, the State holding 51 per cent. of its shares. While the majority of the Committee want to stop short only of nationalisation, two members in a Supplementary Note urge that the problem should be faced immediately. The comprehensive and detailed control contemplated by the Committee, the multitude of small concerns, the possibility of the owners escaping responsibility by abandonment, thus forcing Government to protect adjacent areas from fire areas at their expense, the absurdity of compelling owners to work specified seams without reference to market conditions, and the direct ownership by State of large coalfields themselves, these considerations, they argue, urge the necessity of facing nationalisation instead of burking just that and initiating detailed control.

The Supplementary Note has deservedly attracted general support in that it seems to be more consistent in its reasoning. The authors of the Note do not agree with the suggestion of the main report that the Government should provide a market for inferior coal by using it for the railways and other agencies under their direct control. "We do not", they state, "see any reason why this should be forced on the State agencies while the other consumers are left free to exercise their free choice. The State agencies, as economic units, will object to this procedure and can reasonably ask that all other consumers should also participate in the use of such coal". Private enterprise has not altogether had a clean record, and the principal reason which impelled the railways to acquire coalfields was because they found themselves too much at the mercy of the trade. State acquisition of the private mines is decidedly the logical conclusion on the question in view of the enormous stake involved. Economic wisdom appears to indicate that a proper recognition of the fundamental facts and an attempt to face them will in the long run secure public interest better than exaggerating the present difficulties which will only be accentuated by any endeavour to compromise. The trend of development as regards nationalisation of coal-mines in Great Britain—the home of laissez-faire and private enterprise *par excellence*—has been in the same direction. In fact, the hesitation in that country has been far less than that disclosed in the main report. On the side of the railways there will not be any opposition to the progress of the development in this direction.

STANDING FINANCE COMMITTEE FOR RAILWAYS.*

The Standing Finance Committee for Railways met at Calcutta on the 28th and 29th June, 1937. Amongst the several questions discussed by them was the construction of the Khadro-Nawabshah extension within the sphere of influence of the Sukkur Barrage Scheme. As a postponement of the construction of the project which was contemplated as far back as 1925 would be detrimental to the general development of the area, the Railway Board obtained after negotiations with the Sind Light Railway, Ltd., advantageous terms permitting the retention by Government of 60 per cent. of the gross earnings for the working of the Mirpurkhas-Khadro Railway. This is expected to compensate Government for the short-circuiting of the present traffic, financial results in the succeeding year after the opening of the proposed line is estimated at one half of 1 per cent. The Government of Sind being anxious to provide transport facilities would in the absence of railway construction be prepared to build a big road from Nawabshah to Khadro. The Committee approved of the proposal that the Sind Government should be asked to either make a contribution to capital cost or to give a guarantee that whenever the net yield on capital outlay of the line worked out as indicated in the memorandum fall below a reasonable percentage the deficit would be made good by them. The proposal of the Railway Board on the advance allotments to the extent of Rupees 125 lakhs as advance grant for general purposes stores for 1938-39 was also approved.

The Standing Finance Committee also dealt with a number of proposals affecting the personnel organisation of railways. The Bengal and North Western Railway in view of the increase of work entailed by the rapid ex-

* Proceedings of the meeting of the Standing Finance Committee for Railways Vol. XIV—No. 1, 1937.

tension of interlocking and signalling on the Bengal and North-Western and Rohilkhand-Kumaon railways desired the appointment of an additional Assistant Signal Engineer. The proposal was agreed to subject to in case of direct recruitment that every attempt should be made to find a suitable Indian. The Bombay Baroda and Central India Railway which was working with a deficiency in its leave reserve proposed that four additional Junior Scale posts should be provided for leave reserve on the introduction of which three posts of probationers will be abolished. The extra cost involved has been estimated at about Rs. 787 per mensem. Approval was accorded to this on the presumption that it will not prejudice the extent to and the manner in which probationers were recruited to the department. The Eastern Bengal Railway has been permitted to create an additional post of District Traffic Superintendent (Commercial) in lieu of the existing post of District Traffic Superindentent (Crews). On the East Indian it was proposed to make permanent the temporary post of Inspector of Underground Works beneath railway lines in the colliery area. In view of the recommendations of the Coal Mining Committee the Committee approved of the proposal subject to the condition that the Railway Board should satisfy themselves that the creation of a permanent appointment is not rendered unnecessary.

NOTES AND MEMORANDA

MAINTENANCE OF GOODS STOCK

The importance of a financial study in connection with the rehabilitation programme to determine what repairs are economical was dealt with by Mr. K. F. Nystrom, Superintendent, Car Department, Chicago and Milwaukie St. Paul and Pacific Railway. The vulnerable spot to-day on many railway systems is that on many railways the designs are usually handled in a department which seldom comes into contact with the operation. A systematic retirement programme must be such that the mechanical wear and obsolescence will follow a natural and systematic trend. This, however, is not an easy problem, as what is economical under one condition may be unsound in another. The fluctuations in the value of new stock may render an adjustment of the price involved in regard to repairs. The financial analysis of the two facts, how much a new wagon would cost and how much it would cost to give general heavy repairs or rebuild an old car after the estimated extended life has been ascertained will alone establish whether or not such schedule repairs are economical. An examination was made of this question and full data were prepared of the financial and theoretical facts and also experience as to the cost of maintenance and schedule repairs along with the physical characteristics of the wagon, inherent weaknesses and obsolescence. How much money can be economically spent on a car 25 years old to extend the life another four years in place of buying a new one? Mr. Nystrom showed that it cost 34·36 cents to carry and maintain a new car for four years per dollar of investment and 19·01 cents could be spent in general repairs to extend the life for another four years. Assuming that a hopper car can be purchased for $2,000 then 19·01 cents times $2,000 *viz.*, 380·20 dollars could be spent as a maximum if it were certain that four or more years of service could be attained. He proposes a definite wagon repair programme and quotes the case of the Milwaukie Railroad which ten years ago started with a four year cycle of schedule of repairs which was decided upon after a study was made over the life of bin trucks with all component parts and the general condition of the car. The experience during this period has shown it to be both desirable and economically sound.

MASS METHODS IN ACCOUNTING.

Mr. G. J. Bunting, Vice-President, Illionois Central, addressing a recent Regional Conference of Railway Accounting Officers at Chicago discussed how mechanisation and specialisation secured economy of time and money and better and quicker reports. After referring to the gradual change from the old lettercopy presses in longhand to the advent of the typewriter, the use of stenography, the dictating machine, mechanical punch card machines facilitating the mass production of statistical data within short limits of time and with the least manual labour, he considered the merits of divisional or central accounting. During the depression many railways changed from the decentralised plan to the centralised plan and have marvelled at the great saving of expense offered by the latter. Under the decentralised plan "mass production methods are not capable of introduction to the same extent as the centralised plan affords. Duplication of overhead is eliminated and standardisation is much easier. In spite of what the general Accounting Officer can do, the individual division will resort to divergent methods most of which divergencies involve more expense than standardised procedure. Of course standardisation must not be static. As the assembly line cannot be static except for stated periods, so accounting methods must be uniform over stated periods if mass production methods are to be used. Short cut methods under bureau administration can much more easily be available under the centralised plan than they can be under decentralisation." Mr. Bunting specially referred to the accomplishments realised on the Illinois Central by mass production methods as regards disbursements accounts, capital expenditure and valuation accounts, roadway completion reports, etc. "One of the greatest facts for economy in the centralisation of accounting work" he states, is specialisation on the part of individual employees which has greatly increased their capacity, the uniformity of results and the satisfaction of the employees themselves. Centralisation of work in two offices is primarily for geographic reasons but with uniform procedure and quick distribution of volume of work in each office, one office provides with a valuable comparison with the other. The work of accumulating train engine car and ton mile statistics is entirely mechanised on the Illinois railway. Mass production methods have enabled the preparation of bills covering repairs to freight cars of foreign lines for making exact copies, photostatic machines, duplicating machines and other methods of mechanisation have been very widely used.

INTERSTATE COMMERCE COMMISSION'S JUBILEE.

The news that the Interstate Commerce Commission has completed its first fifty years of existence during the first week of April 1937 will be received with interest by all students of transport regulation. Founded in 1887 the Interstate Commerce Commission has hewn a new path of institutional technique in dealing with the complex matters of the modern railway and other transport industries. Its jubilee was celebrated in a fitting manner by the Association of Practitioners at a banquet attended by 800 guests and by a full day of speeches delivered before an assembly of the Commission's staff and friends on April 1. The speakers referred to the distinguished record set by the Commission marked by open-mindedness and impartiality. As one of their speakers, Mr. John E. Benton, the General Solicitor of the National Association of Railroads and Public Utilities Commissioners observed, "It is a proud record which the Interstate Commerce Commission has made. The breath of scandal has never touched that Commission. Its judgments have never been swayed by political considerations. No one would claim that it has never been wrong, but it may be justly said that it has always endeavoured to be right, and that it has been an able Commission, which has kept its course upon a high plane, and has justly earned the secure and exalted place it holds in the public confidence."

Mr. Esch, a former Commissioner, paying a tribute to the achievements of the Commission said: "It has never shrunk from any task, no matter how difficult or onerous. It has never hesitated to declare its opinions for fear of arousing the hostility of special, political or governmental interests. Keeping within the four corners of the laws it was required to administer, it sought only for the truth, that justness and reasonableness which are the foundations of the public interest." The Commission deserves all the encomiums which have been paid to it as it constitutes the only regulatory tribunal of its kind which has exercised profound influence not only in the States but also all the world over.

THE CANADIAN NATIONAL RAILWAYS DEBT ACT.

Current developments on the Canadian railways have been referred to from time to time in these pages and the lines of analogous development in this country confers a special interest to recent proposals regarding the policy of Government towards the Canadian National Railways. Honourable C. D. Howe, Minister of Transport, had introduced a bill to the effect that the capital of the Canadian National Railways should be written down to the extent of $262,000,000. There were, of course, protests from the Conservative leader, Rt. Hon'ble R. B. Bennet and others. But the bill has been passed by the House. According to the new balance-sheet the Minister said in reply to the criticisms the duplication of debt as between the present railway balance-sheet and the net debt of Canada has been eliminated. "We include," he continued, "in the net railway balance-sheet all the debt of the railway which is not carried as part of the debt of Canada. . . . . It seems to me that this legislation is going to give to the officers and employees of the railway a more reasonable objective to attain the earning power of the property and bring some return to the investment in the property by setting up the investment in the property as a capital rather than a largely inflated sum. It will put new hope in those responsible for the operation of the property." The bill was then given the third reading on division. The Capital Revision Act was put into operation by Government proclamation on May 1.

While Mr. Howe has secured a victory in respect of this bill he has had a defeat as regards another bill, the Transport Bill, which endeavoured to regulate all forms of transport. The defeated Transport Bill would have changed the Board of Railway Commissioners to a Board of Transport Commissioners, with powers similar to its present powers on railways —for air, water and highway transportation as far as Dominion jurisdiction permitted. The bill would also have allowed the railways to contract "agreed charges" with shippers who would ship exclusively by rail.

I.R.C.A. BULLETINS.

The Indian Railway Conference Association has initiated the publication of a series of bulletins. Last year, the President of the Association, Mr. Colam, referred to the desirability of educating the public on the activities of the Indian railways and thus help to a proper appreciation by the public of the contribution made by the Indian Railways to the social and economic life in India. So far two bulletins have been issued. The first deals with the subject of the cost of railway administration, It has been suggested that critics are possibly being misled by the fact that the account Administration in the Public Accounts of railways embraces a certain number of items not usually suggested by the term "administration". The bulletin states:

"The total cost of providing railway transport is the sum of the actual "Working Expenses" (*i.e.* payments) *plus* the interest on the incurred debt. Taking this sum as the total cost, the so-called "Administration" costs amount to 15 per cent., divisible as follows:—

Items.		*Per cent. of total cost.*
(1) Salaries, Provident Fund, Gratuities, etc., of all Administrative and Executive Officers	..	2·97
(2) Home Board Cost	..	0·21
(3) Salaries of Subordinate Supervisory Staff	..	2·44
(4) Salaries of Office Staff of all kinds	..	3·25
(5) Provident Fund and Gratuities of all Staff, other than Officers	..	2·91
(6) Cost of Government Telegraph lines	..	0·17
(7) Police Charges	..	0·44
(8) Rates and Taxes	..	0·49
(9) Hospitals, Health, Welfare, etc.	..	0·38
(10) Government Audit	..	0·35
(11) Miscellaneous	..	1·52
Total	..	15·13

As a percentage of "Working Expenses" only (excluding interest charges) the total is nearly twenty-two per cent.

It will be observed that the greater portion of this expenditure is not "Administration" as that term is probably understood. For example, 'Subordinate Supervisory Staff' includes Permanent-Way Inspectors and any one supervising works in however small a capacity: Foremen and their assistants, Traffic and other Inspectors and Traffic Canvassers. Office Staff, another large item, includes not only headquarter offices, but all office staff of whatever description in Districts or attached to Subordinates. Another large item is Provident Fund, which covers all employees except Officers, whatever their occupation. Telegraphs, Police Charges and Rates and Taxes account for nearly one per cent. The expenditure under Hospitals, etc., does not include salaries and is mainly the cost of supplies including the diet of patients in Hospital. By a curious provision of the Accounts Code, though the cost of feeding patients is nearly all recovered from them, it is not credited to this Head of Accounts but to the earnings of the Railway, so the booked expenditure on diet is fictitious.

It will, therefore, be appreciated that assertions that "Administration" costs are unduly high are liable to be based on a peculiarly unfortunate grouping together under the term "Administration" of charges which are not administration at all.

The second bulletin reproduces the comparative statistics of charges for transportation. As most of the figures are more than five or six years old, the Association might have done well to have given more recent figures. The Wedgwood Report gives a comparative table for 1935.

SIR ERIC GEDDES.

The news of the untimely death at the age of 61 of Sir Eric Geddes removes from British public life a remarkable personality. He has filled many distinguished public offices and has played no small part in galvanising the activity of the enterprises or departments which he controlled. His name has been very closely identified with the sphere of transport.

He was born in 1875 in India and his adventurous spirit was shown by his abandonment of a military career in England to go to America for engineering experience. He worked at lumbering in the Southern States, four years with Houstead Steel Works and Baltimore and Ohio Railroad. He proceeded, thereafter, to India and has been six years building and operating on Rohilkund and Kumaon Railway. In 1904 he obtained a minor post as Claims Agent on the North-Eastern Railway and that only with some difficulty. Although he was regarded as an interloper, within six years he rose successively to Commercial Agent, Deputy Goods Manager, Chief Goods Manager and Deputy General Manager with a reversion to the General Managership, an achievement which can only be explained by his outstanding abilities and to that distinguished General Manager, Sir George Gibbs. At the outbreak of war he had already made a name for himself in railway circles. The War offered an opportunity to bring out his sterling qualities—of courage, initiative and organising ability. He was one of the great men of the War, and to him, more perhaps than anyone in those hectic days, could the title "superman" be fittingly applied. He became successively Deputy Director-General of Munitions Supply, Director-General of Transportation, Controller of the Navy and First Lord of the Admiralty. He cut right through the red tape of the War Department and gave fresh impetus to the campaign on the Western Front by ensuring a model system of railway communication with the front line. He, more than anyone, encouraged the employment of technicians in those branches of the Forces most fitting to their experience and ability. The War over, he was engaged to form the new Ministry of Transport, steered the Railway Bill through Parliament and resigned his Ministry when the Bill became law. Thereupon he became Chairman of the Committee charged with the duty of proposing drastic cuts in national expenditure and made recommendations designed to effect the colossal saving of £100,000,000. Later, as Chairman, he restored the fortunes of the Dunlop Rubber Company and became the first executive head of Imperial Airways, both of which positions he held at the time of his death.

DEVELOPMENTS IN MECHANICAL ACCOUNTING—HOLLERITH MACHINES.

The General Manager's Bulletin No. 20 of the Kenya and Uganda Railways and Harbours gives an interesting account of the use of Hollerith machines in mechanical accounting. It is stated that these machines have proved entirely satisfactory and their introduction has facilitated and speeded up the production of accounts and statistics at the same time enabling considerable economies in staff costs to be made.

"In 1935 the British Tabulating Machine Company (from whom the machines are hired) intimated that it was their intention to replace the machines which had by that time been in service some five years. Opportunity was taken by the Administration to investigate the possibilities of new machines incorporating the latest developments in mechanical accountancy and it was decided to install the Hollerith Rolling Total Tabulating Machine, incorporating a Summary Card punch.

Consideration had, in the meantime, been given to the possibilities of utilising the Hollerith Company's Standard Multiplier in the audit of goods invoice calculations of conversion of weights from pounds to tons and the calculation of commodity ton miles. The Standard Multiplier, however, was not entirely suitable and a machine was specially designed to meet requirements. This machine is unique in the sense that it is the first of its kind in use.

The installation of the new machines was completed early this year and the work transferred from the old machines.

The Hollerith card which forms the basis of the system has been revised to accommodate 80 vertical columns of information instead of 45 columns as illustrated by the cards reproduced in Bulletins Nos. 2 and 15. This permits of additional information being transferred to the card and makes possible considerable expansion in the application of machine methods.

Electrically operated Key Punching machines with automatic feed and ejection of cards has increased the daily output of punched cards, despite the greater number of holes per card.

One of the principal jobs and that in which the greatest number of cards is used is the reproduction of essential information from goods invoices (copies of which are submitted by all stations to the Chief Accountant's Office). The punched cards form the basis from which the following are compiled:—

(*a*) Audited goods abstracts,
(*b*) Freight under and over charge statements,
(*c*) Freight Ledger Account bills,
(*d*) Foreign Railway Traffic Clearing Accounts, and
(*e*) Commodity and Rate class ton mile statistics.

Station code numbers are inserted on goods invoices at stations and these together with the classification and rate are checked by the Chief Accountant's staff on receipt. In cases where freight charges are debitable to Ledger Account, the Ledger Account code number of the firm is also given. The detail work of checking invoice calculations has now been transferred to the Audit Multiplier, thus releasing staff for a more intensive check of classification and rates charged. The machine feeds the cards through its various mechanisms and senses the "invoiced" revenue which is held while the machine picks up the weight and rate and multiplies these two factors to provide the "audited" revenue. It next subtracts the audited revenue from the invoiced revenue and if these differ it ascertains which figure is the greater and punches the under-or over-charge (as well as the audited revenue) in the appropriate card columns. These calculations are effected at a speed of approximately 1,000 cards per hour.

The cards are next sorted and passed through the Rolling Total Tabulator which, while based essentially on the same principles as the old tabulating machine, is a revelation in electrical engineering. Every unit of the machine is entirely independent of the others and the required results need merely to be determined by means of the plugboard in very much the same manner as a telephone exchange.

The Tabulator deals with 150 cards per minute and being fitted with six separate and distinct counting units is capable of accumulating 900 items per minute each total having a capacity of eleven figures. The desired results are achieved through flexible wire plugs which transmit the information through various circuits and processes before arriving at the printed statement of facts required.

Figures are transmitted to the machine by means of the holes on the punched cards and can be cross-added, other figures subtracted therefrom and/or the totals rolled into and accumulated in any or all of the counters before the results are printed in the form desired.

Should it be desired to carry forward balances of accounts to following months the tabulator has been fitted with a punching machine which automatically reproduces a punched balance or summary card with all essential information for inclusion with the current cards of the following month, thus enabling the position of each account to be reviewed monthly. One use to which this summary card punch is being put is in the production of summary cards for each commodity by rate class and station from and to, when the monthly commodity statistics are compiled.

All traffic for the year (under each commodity and rate class and between all booking points) will be condensed into approximately 17,500 cards, and when these have been run through the Audit Multiplier for calculation of ton miles, full and comprehensive information for the year is readily available.

Other work which has been transferred to the Hollerith is the complete summarization of all expenditure and receipts, the compilation of personal, etc., accounts (with balance summary cards) the Provident Fund personal accounts (including the monthly calculation and accumulation of interests on the lowest balance by means of the Audit Multiplier) and various monthly tonnage and ton mileage statistics formerly compiled by hand.

It is impossible to give anything in the nature of a comprehensive account of the capabilities of the new machines in an article of this nature, but it is sufficient to say that with figures punched on a set of cards there is no combination and grouping of these figures which cannot be achieved at will through the control provided by the plugboard.

As more experience is gained in the operation and application of the machines it is anticipated that they will be called upon to undertake an increasing amount of statistical and accounting work."

REGISTRATION OF WASTING ASSETS.

The Bulletin also contains an interesting note on the subject of the Registration of Wasting Assets and particularly the methods by which the wasting assets of railways are scheduled and their history recorded. On the Kenya and Uganda Railways wasting assets scheduled as coming within the operations of Renewals Funds are recorded generally in the following form:—

(*a*) Full description of asset, including requisition and maker's number, etc.
(*b*) Class of asset and assessed economic life.
(*c*) Original cost and reference to authority under which purchased and funds from which the cost has been met.
(*d*) Date of installation.
(*e*) Assessed cost of replacement.
(*f*) Annual contribution to Renewals Funds arrived at by dividing the "replacement cost" by the assessed economic life.

This information represents minimum requirements only, additional information such as maintenance and repair costs, etc., being added where such is considered useful.

The wasting assets registers maintained by Departments other than the Chief Mechanical Engineer's Department are in loose leaf book form, which are subject to the usual safeguards.

The registers maintained by the Chief Mechanical Engineer, which are the subject of this article, consist of cards, each asset having a card which contains all relevant particulars. Each class of asset has a distinctive class code number which is indexed and cards for individual assets are compiled by classes and sorted in order of year the assets are placed in service. Coloured cards are sorted at each class of asset, such cards giving the following information:—

(*a*) Particulars of assets, life expired and due for renewals at 1st January of each year.

(*b*) Particulars of assets falling due for renewal during the current year.

(*c*) Particulars of assets falling due for renewal during the following year.

(*d*) Particulars of assets due for renewal during the year following that shown in (*c*).

This information ensures that assets which have reached their assessed economic life are scheduled for examination with a view to determining whether such assets should in fact be replaced.

Particulars of any asset can be readily obtained by means of a card index of registered numbers which shows the class and asset card number of the asset required. A Master Register is also maintained which summarizes all transactions, and the total renewal value of each class of asset as contained on the individual cards must agree with the renewal value shown in the Master Register.

As assets are withdrawn from service after completion of the necessary documents authorising their withdrawal, the cards are stamped "Dead", details entered on the card of the authority for withdrawing and the proposals for replacement, when the cards are then transferred to a "Dead Asset Cabinet".

It will be readily seen that there is a definite continuity of the recording of Wasting Assets forming a detailed history of all assets whether "alive" or "dead", which is of considerable value.

WEIGHT PER PASSENGER.

In a recent lecture to the Cambridge University Railway Club Mr. R. E. L. Maunsell, Chief Mechanical Engineer, Southern Railway, said that in the old days the average dead-weight of railway rolling stock was roughly 5 cwt. per passenger, whereas the modern corridor train represented roughly 15 cwt. per passenger. In luxury vehicles of the Pullman type the weight rose to 1½ to 2½ tons, and in Continental sleeping cars to as much as 4·7 tons per passenger. He added that the hauling power required must be eight to one compared with 25 or 30 years ago, and provision must be made for increased wind resistance and higher average speeds. It should be pointed out that efforts are now being made to reduce dead-weight by the introduction of lighter materials and such principles as articulation.

AMERICAN RAILWAY ACCOUNTING OFFICERS' MEETING.

The American Railway Accounting Officers' Association which has now become the Accounting Division of the Association of American Railroads held its 52nd meeting at the Atlantic City during June 2-4. Mr. F. J. Fell, the chairman, in the course of his address referred to the importance of carefully weighing the subjects which come before the Railway Accountants. He said: "when we complete our audit of the accounts and assemble the figures in the prescribed form and send them, have we performed our duty? In my opinion my answer is "no". The Accounting Departments of these railroads are a veritable storehouse

—which we should present to those in our organisation charged with the duty of getting the business and those whose duty it is to transport it and maintain the railroad and equipment on the way, give real data to our various departments upon our own initiative, we not only build our own prestige but usually increase our net. The executives of our railroad have a great responsibility resting on them and we can by extending our knowledge of the facts and figures, be of great assistance to them. A one per cent. increase in revenue to all railroads means 40,000,000 dollars and a decrease of 1 per cent. or one point in the operating ratio means an increase in the net income of 40,000,000 dollars."

Research is just as necessary in the Accounting Department as it is in the Mechanical Departments and we should be sufficiently "Dollar conscious" to perform our accounting within a reasonable budget and to measure our cost of doing the work in an effort to simplify the accounting and reduce the cost. In conclusion he recommended for consideration:—

(1) A continual review of all accounting classifications.

(2) A persistent effort for more economical methods.

(3) Continuance of cooperation with Federal and State Authorities in simplifying reports and record-keeping.

(4) "Dollar-conscious" in planning our work.

(5) More round-table meetings.

The Vice-President, Mr. E. H. Bunnell, delivered the principal address which reviewed the new objects developed by the Association since its absorption into the organisation of the Association of American Railroads. He emphasised the importance of meetings and the work accomplished by the different committees working under the division. He specially drew the attention to the possibility in the reduction of the cost of accounting for freight revenue by the proposals put forward by the Freight Committee, *viz.*, the use of combination forms in the way-billing of freight, *i.e.*,

(1) To carry a Manibill form the information contained on the B|Lading, the Way-Bill and the Freight-Bill.

(2) The consolidation of Division Sheets and uniformity of division publications.

(3) The adoption of road to road per cents. in the apportionment of revenue on the l.c.l. interline way-bills.

(4) Limiting the number of audits on interline freight accounts.

He protested against the tendency to a mechanical and an unduly expensive performance resulting from inflexible rules expressed in set forms. No matter how perfect the language of an accounting classification, he continued, the question of its interpretation is important to ensure a full review of any suggested changes or interpretations of the accounting classifications which govern the procedure. A Contact Committee has been constituted to consider queries in conjunction with the Bureau of Accounts of the Interstate Commerce Commission. Mr. Bunnell appealed to all the railway accounting officers to take the initiative in assisting in reducing the overhead expenses, particularly in the interroad accounts and settlements in the methods and practices of accounting and in a thorough and critical review of all the so-called paper work, consisting principally of reports and statistics compiled for managerial purposes. In conclusion he submitted for the earnest consideration of the Railroads the following programme:—

(1) Develop a complete budget system to control so far as possible both income and outgo.

(2) Organise a special committee to analyse all controllable costs and keep management informed with respect thereto.

(3) Review of forms, records, reports, statistics, etc., to the end that the most efficient methods of compilation be used and unnecessary reports eliminated.

(4) Develop the possibilities of increasing efficiency with lower costs, by centralising under the Chief Accounting Officer the control and production of records, accounts, and statistics, also the destruction of records.

(5) Review the effective classification of accounts prescribed for railroads and develop changes if any to simplify the procedure and make the accountant more adaptable to the needs of management and the public.

There were also addresses by Hon'ble Murray W. Latimer, Chairman, Railroad Retirement Board on "The Railroad Retirement Act"; O. J. Rider, General Accountant, the B. & Co. Railroad Company on "Some Suggestions in connection with Accounting under the Present I.C.C. Classifications"; Hon'ble Harry Bacharach, President, Board of Public Utility Commissioners State of New Jersey, on the "Importance of Accounting of a Public Utility Commission"; T. H. Seay on "Interline Freight Accounting"; H. J. Walker, Auditor of Disbursements Pennsylvania Railroad, on "Social Security Unemployment Compensation Problems". The rest of the proceedings consisted of the consideration of the reports of the several committees functioning under the Accounting Division.

RAILWAY ROLLING STOCK PROGRAMME FOR 1938-39.

The full details of the Rolling Stock Programme of the Indian Railways for 1938-39, as approved by the Railway Standing Finance Committee, June 29, 1937, are now available. The rolling stock position of the Capital programme is dealt with in advance of the rest because delivery of rolling stock cannot be generally obtained till after a considerable time from the date of which orders are placed. This varies from about 9 months in case of wagons to 18 months in the case of locomotives. To ensure railways obtaining in sufficient time the rolling stock required to carry the anticipated traffic orders have to be placed very considerably in advance. The programme, provides, subject to changes in prices for a total expenditure of Rs. 4,05·38 lakhs for replacement of locomotives, boilers, carriages and wagons which have outlived their economic lives, and on which further repair and maintenance charges are prohibitive. The distribution of the expenditure proposed and approved is as follows:—

	Capital	Depreciation Fund	Total
	(In lakhs of rupees)		
Locomotives ..	2.74	90.62	87.88
Carriages ..	39.19	98.81	1,38.00
Wagons ..	30.79	1,21.91	1,52.70
Total ..	67.24	3,11.34	3,78.58
Add expenditure from Ordinary Revenue			26.80
			4,05.38

Locomotives.

The Railway Board propose to purchase during 1938-39, 22 Broad Gauge engines and 33 Metre Gauge engines on replacement account at a total cost of Rs. 52.63 lakhs (net) for the following railways:—

Broad Gauge	No.	Cost Rs. (in lakhs)
B.N. Garatt Type ..	4	8.98
E.I. W.M. 2-6-4 (modified XV) ..	5	6.57
G.I.P. ..	5	6.57
M.S.M. X.D. ..	10	13.21
	24	35.33
Metre Gauge		
B.N.W. YB 4-6-2 ..	4	3.44*
B.B. & C.I. 4-4-4 Passenger Tanks (5000 lbs. Tractive Effort) ..	10	5.50
R. & K. B.E.S.A. ..	3	2.05
S.I. Tanks with 12,500 lbs. Tractive Effort ..	16	8.35

*Cost of 4 engines on B.N.W. Railway is Capital.

Of these, the locomotives for the B.B.. & C.I. Railway will be manufactured at their own workshops at Ajmer. In view of the instability of the market and increasing prices and the necessity of immediate action, the Railway Board has already placed orders for 10 W.M. locomotives, and this was approved by the Railway Standing Finance Committee.

The provision for locomotives also includes a sum of Rs. 33.09 lakhs on account of 162 boilers (80 Broad Gauge, 67 Metre Gauge and 15 Narrow Gauge) to be purchased under replacement account.

Carriages.

As regards carriages, the total amount provided in the programme is Rs. 1,64·80 lakhs of which Rs. 39·19 lakhs is under Capital Account, Rs. 98·81 lakhs under Depreciation Fund and Rs. 26·80 lakhs under Ordinary Revenue. Except for a small amount of Rs. 13·12 lakhs the entire provision is on replacement account. Exclusive of throw-forwards, carriages to be built on old underframes and inspection carriages are expected to cost Rs. 1,14·47 lakhs. The stock contemplated comprise 365 Bogies and 65 four-wheelers, which provide for upper and lower class and Miscellaneous coaching stock. The bulk of the expenditure will be in respect of lower class stock. The details are as follows:—

	No. Bogie.	4 Wheeler.	Provision Rs. in lakhs.
Upper class carriages ..	17		11·76
Upper with Inter and/or III class accommodation.	2		20·81
Lower class carriages ..	276		58·75
Miscellaneous coaching stock ..	20	65	13·15
Total ..	365	65	1,14·47

With the present equipment of engines and coaching stock the railway administrations find it impossible to run short fast services profitably with a small paying load. They have accordingly proposed to purchase Rail Cars which offer special advantages arising from low operating costs, high speeds on tracks which limit locomotive speed, rapid acceleration and deceleration, facilities of way-side halts, quick turn-round at terminals and the greater average daily mileage. There are already six Broad Gauge Rail Cars in service on the M. & S. M. Railway and one Narrow Gauge car on the G.I.P. four Broad Gauge and two Metre Gauge cars are due for delivery on the S. I. Railway. Provision was made in the present programme for their introduction on the following railways:—

		Rs. lakhs.
B.B. & C.I.	2 Broad Gauge Diesel light units ..	3·00
E.B.	8 „ units Self-propelled Rail Cars ..	9·60
	4 Narrow Gauge units ..	1·20
N.W.	12 Broad Gauge units—Rail Cars ..	13·00
		26·80

The Railway Standing Finance Committee have appproved of the proposals except those for the E.B. which has been postponed.

Wagons.

The Wagon stock programme for 1938-39 provides for a total expenditure of Rs. 1,52·70 lakhs of which Rs. 30·79 will be under Capital and Rs. 1,21·91 under Depreciation Fund. In January last the purchase of 2,000 General Service wagons at a cost of approximately Rs. 85 lakhs was sanctioned. In view of the increasing price of steel and the protracted and uncertain delivery conditions, the Railway Board entered early this year into contracts with Indian Wagon building firms for the supply of

6,095 Broad Gauge General Service Wagons during the year 1937-40. Of this 2,095 are for delivery during 1938-39 at a cost of Rs. 103·83 lakhs. The balance of the provision for the year will be spent on Non-pooled Broad Gauge stock, Metre Gauge General Service and Miscellaneous Wagon stock.

INSTITUTE NEWS.

The following gentlemen have been elected by the Ballotting Committee to the class of membership indicated:—

Associate Membership—

Mr. Lionel Clarence Harper, Trav. Inspector of Accounts, A.B. Railway, Chittagong.

,, Sarojaksha Dutt, Clerk, Budget Section, A.B. Railway, Chittagong.

,, Krishna Gopal Lahiri, Clerk, Budget Section, A.B. Railway, Chittagong.

,, Upendranath Das, Hd. Clerk, Workshop Accounts Office, A.B. Railway.

,, Ram Pado Banerjee, Jr. Accountant, A.B. Railway, Chittagong.

,, L.S.J. Weir, Inspector of Pay Clerks, B. N. Railway.

,, J. Jagannadham, Stock Verifier, B.N. Railway.

Studentship—

Mr. Suraj Prakash Sahni, Prob. Assistant Auditor, A.B. Railway.

,, Santosh Nath Ghose, Clerk, A. B. Railway, Chittagong.

RAILWAY STATISTICS

Advance Grants for General Purposes Stores for 1938-39.

The advance allotments for stores purchases restricted to direct English purchases and of imported stores are made to enable railway administrations to forward indents so as to ensure the timely supply of stores required for the financial year 1938-39. The expenditure on this account has been estimated at Rs. 1,25 lakhs as compared to Rs. 1,10 lakhs for 1937-38.

Table 1—Ten Days Approximate Gross Earnings of all State-owned Railways.

Period.	1936 (In lakhs of rupees)	1937 (In lakhs of rupees)
Ten days ending 10th April	.. 2,59	2,77
Ten days ending 20th April	.. 2,73	2,75
Ten days ending 30th April	.. 2,78	2,84
Ten days ending 10th May	.. 2,60	2,69
Ten days ending 20th May	.. 2,56	2,69
Eleven days ending 31st May	.. 2,67	3,01
Ten days ending 10th June	.. 2,39	2,60
Ten days ending 20th June	.. 2,34	2,51
Ten days ending 30th June	.. 2,19	2,49
Ten days ending 10th July	.. 2,13	2,36
Ten days ending 20th July	.. 2,06	2,23
Eleven days ending 31st July	.. 2,18	2,40
Ten days ending 10th August	.. 1,94	2,06
Ten days ending 20th August	.. 2,05	2,13
Eleven days ending 31st August	.. 2,22	2,34

TABLE II.—MONTHLY PROGRESS OF WORKING EXPENSES OF THE PRINCIPAL STATE-OWNED RAILWAYS.

(In Lakhs of Rupees).

Railway.	Up to April.		Up to May.		Up to June.		Up to July.	
	1936	1937	1936	1937	1936	1937	1936	1937
A.B.	10	10	17	18	27	28	35	36
B.N.	42	46	87	89	128	133	173	177
B.B. & C.I.	42	43	88	86	132	129	176	172
E.B.	35	36	63	64	92	93	124	123
E.I.	87	87	159	162	238	239	314	320
G.I.P.	51	55	106	104	161	158	219	213
M. & S.M.	28	28	54	57	83	90	113	116
N.W.	69	68	147	143	226	212	300	287
S.I.	22	23	44	44	67	65	90	86
Tirhoot and Lucknow Bareilly ..	7	6	13	11	18	17	24	24
Other Railways	1	1	3	2	7	7	9	9
Total ..	394	403	781	780	1,179	1 ,171	1,577	1,563

TABLE III.—PROGRESS OF UP-TO-DATE EARNINGS OF ALL THE PRINCIPAL STATE-OWNED RAILWAYS.

(IN LAKHS OF RUPEES).

Railway.		Total earnings for the period (ten/eleven days) ending.														
		April 10th.	April 20th.	April 30th.	May 10th.	May 20th.	May 31st.	June 10.h	June 20th.	June 30th.	July 10th.	July 20th.	July 31st.	August 10th.	August 20th.	August 31st.
A.B. ..	1936	4	8	13	17	21	26	30	35	39	43	47	51	55	60	64
	1937	5	9	14	18	22	27	31	36	41	45	50	55	59	65	69
B.N. ..	1936	24	49	75	101	125	152	176	198	221	242	261	282	301	320	342
	1937	27	55	84	111	136	167	193	217	241	269	293	316	340	361	386
B.B. & C.I. ..	1936	37	74	113	148	182	217	249	280	308	334	359	386	409	433	457
	1937	36	74	115	153	190	229	268	303	335	362	388	416	439	466	495
E.B. ..	1936	14	27	41	55	69	82	96	109	122	134	146	158	171	184	200
	1937	16	31	46	61	74	89	105	118	130	142	155	169	183	196	210
E.I. ..	1936	55	115	175	236	295	355	406	457	503	550	595	642	684	729	775
	1937	57	118	179	241	301	365	427	485	540	600	651	705	753	801	852
G.I.P. ..	1936	39	81	123	161	197	237	270	303	333	360	387	416	440	468	501
	1937	39	78	122	162	201	243	283	318	349	373	399	428	448	474	507
M. & S.M. ..	1936	20	41	62	82	103	124	143	162	180	199	217	235	251	266	283
	1937	22	41	62	81	102	126	145	164	183	201	217	237	253	269	287
N.W. ..	1936	44	92	140	180	221	263	303	343	379	416	453	493	529	566	604
	1937	53	101	145	187	233	290	335	376	424	471	513	558	601	637	674
S.I. ..	1936	15	30	45	59	74	90	105	119	133	147	160	174	186	199	215
	1937	15	29	45	59	74	90	105	119	135	150	164	178	192	207	223
Tirhoot and Luck-now Bareilly ..	1936	6	12	19	26	32	38	44	49	54	59	64	69	73	78	83
	1937	6	13	20	27	34	40	48	54	59	66	71	77	82	87	92
Other Railways ..	1936	1	3	4	5	7	9	10	11	13	14	15	16	17	18	19
	1937	1	3	4	5	7	9	10	11	13	15	16	18	20	20	22
Total ..	1936	259	532	810	1,070	1,326	1,593	1,832	2,066	2,285	2,498	2,704	2,922	3,116	3,321	3,543
	1937	277	552	836	1,105	1,374	1,675	1,950	2,201	2,450	2,694	2,917	3,157	3,370	3,583	3,817

TABLE IV.—COMPARATIVE STATEMENT SHOWING THE PROGRESS OF UP-TO-DATE WAGON LOADINGS ON CLASS I RAILWAYS.

Commodity.		Period ending.							
		April 10th.	April 20th.	April 30th.	May 10th.	May 20th.	May 31st.	June 10th.	June 20th.
Coal and Coke ..	1936-37	33,658	65,613	98,428	128,451	160,901	194,202	222,378	250,969
	1937-38	33,596	64,293	100,040	131,175	163,285	196,628	225,797	255,923
Grains and Pulses ..	1936-37	18,359	39,335	61,893	81,766	107,062	131,691	154,164	175,921
	1937-38	20,895	45,444	69,139	93,384	119,657	149,033	173,654	194,117
Oil-seeds ..	1936-37	8,000	17,037	25,233	30,559	36,329	40,820	44,440	48,685
	1937-38	9,992	17,656	24,419	30,263	35,967	41,566	45,581	49,041
Cotton ..	1936-37	7,264	14,602	21,415	26,635	31,316	35,702	39,813	43,745
	1937-38	6,909	12,246	17,150	21,195	24,722	28,908	32,332	35,152
Miscellaneous Smalls ..	1936-37	45,156	91,111	138,523	178,665	229,097	277,270	323,707	369,707
	1937-38	49,033	98,836	149,877	177,918	245,281	298,209	346,501	392,669
Miscellaneous full wagons ..	1936-37	81,475	153,497	231,500	293,067	366,060	437,569	504,003	569,788
	1937-38	93,318	184,069	274,713	357,748	436,211	518,132	588,101	656,299
Home Line Stores and Materials.	1936-37	10,300	20,309	30,470	38,877	50,230	62,158	73,223	87,829
	1937-38	13,002	23,206	35,253	45,562	55,937	68,369	82,008	92,239

TABLE IV.—COMPARATIVE STATEMENT SHOWING THE PROGRESS OF UP-TO-DATE WAGON LOADINGS ON CLASS I RAILWAYS—(*Contd.*)

Commodity.		Period ending						
		June 30th.	July 10th.	July 20th.	July 31st.	August 10th.	August 20th.	August 31st.
Coal and Coke ..	1936-37	277,626	304,457	327,338	352,387	373,680	398,301	424,644
	1937-38	284,412	314,211	340,361	370,276	393,019	418,664	447,477
Grains and Pulses ..	1936 37	194,028	210,663	228,890	248,910	266,099	284,681	301,470
	1937-38	216,801	237,197	256,558	277,853	294,747	311,642	327,729
Oil-seeds ..	1936-37	53,082	57,805	62,764	67,872	72,783	78,325	83,457
	1937-38	52,052	54,844	58,934	64,080	68,027	71,367	75,088
Cotton ..	1936-37	47,595	51,367	55,234	58,401	60,264	61,959	63,726
	1937-38	37,700	39,846	41,769	43,996	45,719	47,464	49,536
Miscellaneous Smalls ..	1936-37	411,594	455,370	496,005	540,348	577,819	617,712	663,241
	1937-38	440,042	485,517	529,073	578,205	619,989	663,822	710,828
Miscellaneous full wagons ..	1936-37	628,174	682,348	733,682	790,131	838,608	892,846	954,687
	1937-38	721,281	782,080	835,731	896,544	951,009	1,008,096	1,069,958
Home Line Stores and Materials.	1936-37	93,133	102,439	111,467	122,379	131,509	140,985	151,569
	1937-38	103,558	114,228	125,335	139,648	150,724	162,490	176,384

CURRENT PERIODICALS.

Incorporated Accountants' Journal, Vol. XLVIII—

The Meaning of "Free of Income Tax", p. 236; *Specimen Forms of Accounts,* p. 240; *Methods of Fraud,* Lecture by Mr. Sydney M. Caldwell, A.C.A., p. 301; *The Design of Accounts,* p. 348.

Accountant, Vol. XCVI—

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